Spring 3-11-2024

The Role of Evidence-Based Practice in the Decision-Making Processes of School-Based Speech-Language Pathologists

James Farley
james.farley@student.shu.edu

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James Farley

Dissertation Committee:
Jennifer Timmer, Ph.D., Chair
Daniel Gutmore, Ph.D.
James Falco, Ed.D.

Submitted in Partial Fulfillment
of the Requirements for the Degree
Doctor of Education

in the Department of Education Leadership Management and Policy

Seton Hall University
2024

COLLEGE OF HUMAN DEVELOPMENT CULTURE & MEDIA
DEPARTMENT OF EDUCATION LEADERSHIP MANAGEMENT & POLICY

APPROVAL FOR SUCCESSFUL DEFENSE

James Farley has successfully defended and made the required modifications to the text of the doctoral dissertation for the EdD during this Spring Semester 2024.

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The mentor and any other committee members who wish to review revisions will sign and date this document only when revisions have been completed. Please return this form to the Office of Graduate Studies, where it will be placed in the candidate's file and submit a copy with your final dissertation to be bound as page number two.

Acknowledgments

First, I must thank a few people who saved my life at one point or another! Those people include Emeka Chijoke, Richard Westover, and Debbie Benson.

To Anthony Rosati, a teacher at Saint Joseph's High School in Metuchen, New Jersey, who taught me how to lift weights. Through his training, I received an outlet that has helped me stay grounded through several challenging periods of my life.

To my BJJ crew, Chintal Shah, Anthony Newman, Phil Lensi, Stan, Xiaoyi Zhu, Arjay Vergara, and of course, Professor Gustavo Fernandes. Thanks for always helping me get out of my head throughout this mentally challenging process! Without finding all of you, it would have been much more difficult to complete this dissertation.

A huge thank you to the members of my Seton Hall cohort. That includes my teammate Farizeh Bedaiwi, Theresa Coughlin, and Oona Abrams. Also, a HUGE thank you to Dr. Cheryl Myrie, Binal Patel, and (by far one of the toughest dudes on the planet) Andres Munoz.

A very special thank you to two of my best friends who have become like family: Nicole Montilus and Jessica Volk. Thank you for always putting up with my shenanigans at work and talking me through my (frequent) episodes of anxiety! Without you two, I would never be where I am today!

Also, I would be remiss if I did not give a major shout-out and thank you to my best bud Dan "Pretty Rick" Levine. I know things have been crazy over the past few years, but our texts, talks, and hangouts always came at the right time. You're a huge reason why I was able to get through this process, and I can't thank you enough!

Speaking of work, I have had the honor of working with some of the best colleagues and friends a person could ever ask for. Those individuals include Jenna Connors, Dr. Erik Raj, Jeffrey Tobie, Antoinette Emden, Ken Saggese, Laura Toscano, Rebecca Nesterwitz, Faith

Newins, Margaret Doody, and Katarzyna Zugaj. Your friendship, professionalism, and guidance were consistent sources of inspiration throughout this journey. Thank you all so much!

A huge thank you to the members of my committee Dr. Daniel Gutmore; Dr. James Falco; and my mentor, Dr. Jennifer Timmer. Dr. Gutmore and Dr. Falco, it has been an honor to work with you throughout this process. You both exude what I hope to be as a professional in education. Your contributions throughout this dissertation process cannot be understated. Thank you both for allowing me to complete this dissertation with a committee of such wonderful professionals! Finally, I want to express my sincerest gratitude to Dr. Jennifer Timmer for her guidance and endless patience with me throughout this process. Aside from your technical support regarding the dissertation itself, thank you for always talking me through the tough times and giving me a good laugh when I needed it. I feel like you always helped me avoid landing on "bankruptcy" every time I spun my "Wheel of Fortune." Seriously, thank you for everything!

Dedication

To my wife, Ara: You are truly the most amazing person I have ever met. I thank God every day for bringing you into my life. Since meeting you, every day has been a dream come true. I never thought I could know the kind of indescribable happiness that you have given me. I love you so very much. Nothing in my life would be possible without you. Nothing.

To my sons Jackson (the first "Doctor" in this family) and John, I hope one day you can read this and know just how special you are to me. It was the birth of Jackson that inspired me to start this journey and the arrival of John that gave me the motivation to complete it. I love you two more than words could ever express.

To my mom and dad, I apologize for putting you on an amusement park of emotional roller coasters for the past four decades or so. I am extremely grateful for the love and support you have given me throughout my life. I love you both very much and am sorry for the abundance of headaches that I have caused in the past. Please know that even during the worst of times, I always wanted you to be proud of me.

To my brothers Dan and Brian, thank you both so much for sticking with me through all the ups and downs of the past few decades. While you were forced to stay in my corner when we were kids, you could have easily left it as adults! Seriously, thank you both for always being there and making our family excellent.

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Abstract

The American Speech-Language-Hearing Association (ASHA) encourages speech-language pathologists (SLPs) to implement evidence-based practice (EBP) in clinical decision-making processes. Through the utilization of EBP, SLPs increase their ability to make informed decisions and recommendations for treatment. Despite ASHA's position that EBP is necessary to ensure the provision of high-quality care, there is conflicting evidence as to how consistently SLPs in public middle schools implement it. The purpose of this study was to explore the degree to which middle school-based SLPs use EBP for determining student eligibility for speech-language services and in their decision-making processes. For this qualitative study, 12 ASHA-certified, New Jersey public middle school-based SLPs were interviewed to identify factors that they consider for eligibility determinations, assessment processes, recommendations, and discontinuation of direct services. Using a grounded theory methodology, the transcripts of the participant interviews were coded and analyzed in three distinct phases: open coding, axial coding, and selective coding. The results from the analysis revealed that ASHA certified middle school-based SLPs routinely use EBP when determining eligibility for services and in their decision-making processes; however, clinical expertise and the perspectives of the students and parents are weighed much more heavily than the best available evidence. Participants frequently cited time constraints due to large caseloads and access to a limited selection of standardized assessments as barriers to EBP. Implications of the study suggest that middle school-based SLPs allocate more time for scientific research, as well as vary mandates and service delivery models. The findings also indicate that school administrators should play a more active role in promoting the feasibility of EBP for public middle school-based SLPs. Suggestions for administrators to support the use of EBP among middle school-based SLPs include the provision of clearer

eligibility guidelines, more opportunities for professional collaboration, and ensuring that clinicians have access to a wide selection of psychometrically appropriate formal assessments.

Keywords: School-based speech-language pathologist, Middle school speech-language services, Evidence-based practice, Eligibility for speech-language services, Dismissal from speech-language services, Speech-language recommendations, Speech-language service delivery models

CHAPTER 1

INTRODUCTION

The ability to successfully comprehend and utilize language is a skill critical for any student wishing to maximize their academic potential. In its most basic form, language is used when an individual responds to a sound, follows a one-step command, or conveys a rudimentary need (Akmajian et al., 2017). Language, its intricacies, and its complexity traditionally develop in a manner that allows an individual to communicate in an age-appropriate manner across social and academic settings. For students, typical speech-language development is crucial for the attainment of optimal educational outcomes (Nippold, 2016). Therefore, school districts across the United States employ speech-language pathologists (SLPs) who use evidence-based practice (EBP) to assess student eligibility for services, and if necessary, make recommendations for treatment. EBP is also critical in determining appropriate speech-language goals, as well as the modality, length, frequency, and duration of services (Brandel & Frome Loeb, 2011). Finally, school-based SLPs rely on EBP when making determinations for when a student's speech and/or language skills are within normal limits, or when a student should be dismissed from services (Baker & McLeod, 2011).

Differentiating Between Speech and Language

In the school setting, the terms *speech* and *language* are typically grouped together (e.g., *speech-language therapy*) and erroneously considered synonymous by many members of the school community. According to the American Speech-Language-Hearing Association (ASHA, n.d.-m), the two have significant differences. Thus, a person can have deficits in speech, language, or both. Speech or language disorders can adversely affect academic progress (Nippold, 2016).

Speech

Speech refers to the *production* of words and sounds. It is comprised of three areas: fluency, voice, and articulation. Deficits in any of these three areas can hinder speech intelligibility, a critical component of effective communication (ASHA, n.d.-m). Compromised speech intelligibility often has detrimental effects on functional communication and social participation (Hustad, 2012). Further, appropriate speech intelligibility is essential for full participation in classroom activities and academic success (Murgia et al., 2023).

Language

Language refers to the words that we *use* and how we use them to convey needs, share ideas, and express thoughts (ASHA, n.d.-m). It is a system of agreed-upon spoken, manual, or written symbols by which members of social groups express themselves (Trask, 2003). Language is comprised of five domains: morphology, phonology, syntax, semantics, and pragmatics (ASHA, n.d.-m). Adequacy in these domains is pertinent for an individual's competency in the areas of receptive, expressive, and pragmatic language (Gremillion & Martel, 2013).

Receptive language refers to an individual's ability to understand and comprehend language. Skills pertaining to receptive language include the ability to follow directions, comprehend questions, understand short stories, and identify common objects when they are named (Jaekel et al., 2021). *Expressive language* refers to an individual's ability to successfully convey wants and needs. These abilities can be expressed through multiple modalities (e.g., gestures, and words), and can demonstrate an individual's understanding regarding the meaning of words, grammatical forms, and overall vocabulary (Fisher, 2017). Finally, *pragmatic language* refers to an individual's ability to use language across a variety of contexts. For students,

pragmatic language refers to their ability to use language in the classroom, with peers, and within the household (Green et al., 2013).

Speech and language are interrelated and are both crucial to a student's communicative success across academic, social, and household contexts. For instance, a student's expressive language abilities, such as conveying information, commenting, requesting, or answering questions, are often contingent on their receptive competency, or their ability to understand the language being utilized in the environment (Gremillion & Martel, 2013). Similarly, pragmatic language skills can determine how appropriately an individual can demonstrate their receptive and expressive language skills. Although language can be expressed through a variety of modalities, verbal communication is most used by students and teachers in the school setting (Green et al., 2013). Thus, difficulties with speech production can adversely affect an individual's ability to fully demonstrate their language abilities, which could be detrimental to their academic and social development (Hagaman et al., 2010).

The Role of the School-Based Speech-Language Pathologist

According to ASHA's (2023) Code of Ethics, "Individuals who hold the Certificate of Clinical Competence shall evaluate the effectiveness of services provided, technology employed, and products dispensed, and they shall provide services or dispense products only when benefit can reasonably be expected." Since 1975, in accordance with the Public Law 94-142 Education Act, public school districts have been mandated to provide speech and language services to treat disorders related to voice, fluency, articulation, and language (Euna Solutions, 2023). Students with deficits in these areas are at an increased risk for academic and behavioral struggles (Nippold, 2016). For students with speech and/or language disorders, the provision of services from a trained SLP may be warranted. SLPs are employed in most school districts throughout the

United States. They are charged with assessing and treating student skills pertaining to speech and language (Ehren, 2002). In upholding their professional responsibilities, school-based SLPs must apply EBP to make critical decisions in the evaluation and treatment of students (Dollaghan, 2007).

Evidence-Based Practice

EBP involves the utilization of the most up-to-date and reliable scientific evidence, consideration of the patient's/parent's perspective, and incorporation of clinical expertise to guide decision-making regarding the assessment and treatment of individuals (ASHA, n.d.-h). In 2004, ASHA released the Report of the Joint Coordinating Committee on Evidence-Based Practice. The purpose of the report was to guide student clinicians on how EBP can be integrated into their clinical decision-making processes (Robey et al., 2004). In recent years, there has been an increased emphasis, driven by federal regulations and ASHA, on SLPs incorporating findings from peer-reviewed research into their decision-making processes. This includes recommendations concerning assessment, as well as interventions, service delivery model, frequency, and duration (Hall-Mills et al., 2023).

Referral for a Speech-Language Evaluation

In the State of New Jersey, students between the ages of 3 and 21 suspected of having an educational disability may be referred to a Child Study Team (CST) for an evaluation. The CST is a group of school district employees, that as determined by the New Jersey Department of Education, includes a psychologist; social worker; learning disabilities teacher consultant; and when warranted, a speech-language specialist (SLS). The CST provides services like teacher and parent consultations, evaluations, and recommendations for students experiencing academic difficulties. Referrals can be made by a parent, instructional staff, or administration. According to

the New Jersey Administrative Code (NJAC) on special education, a CST evaluation must include an assessment by at least two or more certified personnel of the team. If necessary, additional evaluations may be conducted by other specialists, such as occupational therapists, physical therapists, audiologists, school nurses, physicians, and SLPs (New Jersey Administrative Code 6A:14, 2015). When members of the CST believe a student may have a communication disorder, a speech-language evaluation is requested. Speech-only evaluations can also be requested by faculty members and parents who suspect that their student may have articulation, fluency, or voice disorder.

In public school districts across the United States, speech-language services are warranted when the linguistic skills of the student are adversely affecting their academic performance (Nippold, 2014). Therefore, students in good academic standing who are exhibiting deficits in articulation or fluency may be unable to receive speech therapy in the school setting. Further, students referred for a speech-language evaluation by the CST must demonstrate quantifiable weaknesses in the areas of receptive, expressive, or pragmatic language to receive speech-language services (Ireland & Conrad, 2016). School-based SLPs use quantitative data from standardized measures as part of the evaluative process to determine the presence of a language disorder, its severity, if speech-language intervention is warranted, and if so, at what frequency.

Evidence-Based Practice and Assessment

School-based SLPs evaluate students for disorders related to language and/or speech intelligibility. SLPs are required to use evaluative processes that comply with regulations stipulated in the Individuals With Disabilities Education Act (IDEA) as well as state regulations and/or local requirements (Ireland & Conrad, 2016). Although parameters concerning the

speech-language evaluative process fluctuate across states, for a speech-language evaluative battery to be in alignment with IDEA, the evaluative process must consist of more than a single measure. ASHA provides further guidance in using EBP during an assessment process. According to ASHA, when performing a speech-language evaluation, practitioners should consider external scientific evidence, client/guardian perspectives, internal evidence (e.g., information on the student being assessed), and clinical expertise (Higginbotham & Satchidanand, 2019).

Speech-language assessments are selected based on validity and the purpose of the evaluation (e.g., identify the potential presence and/or severity of a deficit, obtain a standardized score for a classification, and demonstrate progress; Daub et al., 2021). In the school setting, decisions concerning assessment should be made after the needs of the individual student have been considered (Curran et al., 2022). For all evaluative processes, evidence-based research has suggested that SLPs use both formal and informal measures. The formal measures include at least one standardized assessment that can yield a standardized score and a percentile rank. Informal measures vary among therapists but often involve parent/teacher interviews, classroom observations, and a language sample (Fulcher-Rood et al., 2019).

Informal Measures

For school-based SLPs, interviewing parents and teachers allows the clinician to understand their concerns, as well as their perspectives on what factors are hindering the academic growth of the student. Further, classroom observation allows the clinician to witness the student in a naturalistic setting. Depending on the concerns of the parents and teachers, the SLP may look specifically at how a student communicates in the classroom, if they are able to

follow the directions from their teacher, or their interactions with peers (Bawayan & Brown, 2022).

The acquisition of a language sample is considered by most SLPs to be an important part of the assessment battery (Kemp & Klee, 1997). In fact, language samples offer critical information concerning a child's utterance length, language complexity, articulation skills, comprehension, narrative skills, and direction-following abilities. To obtain a language sample, clinicians often present a child with a wordless picture book, and then ask them to tell the story. Students are then asked to retell the story without the support of the pictures. Language samples typically include approximately 50 utterances from the child. They can be transcribed in real time but should be recorded to ensure accuracy (Prath, 2018).

A language sample analysis (LSA) is considered the gold standard by which clinicians can assess linguistic development, evaluate changes in linguistic contexts, and monitor changes from intervention (Heilmann et al., 2010). Used to evaluate spoken language in naturalistic contexts, an LSA can help clinicians identify the features of language that are adversely affecting an individual's communication. Specifically, LSAs can effectively evaluate a student's language proficiency in the areas of syntax, morphology, semantics, verbal facility, and errors in speech (Miller et al., 2016).

Despite the potential wealth of information that LSAs can add to the assessment results, many SLPs who work with children experiencing language delays do not conduct them (Klatte et al., 2022). The consensus among school-based SLPs is that LSAs, while potentially useful in determining the severity of a disorder, are often neglected due to time constraints, in conjunction with the labor needed for their creation (Prath, 2018). Additionally, many SLPs feel uncertain about how to properly analyze a speech sample. For SLPs who use language samples as an

informal assessment, most transcribe them in real-time without the use of a recording device (Klatte et al., 2021). Among SLPs, there is also a lack of agreement in terms of how long a speech sample should be, as well as how their acquisition should be facilitated (Kemp & Klee, 1997).

Formal Measures

The results from the informal measures provide the SLP with the information needed to make an informed decision concerning what protocols should be chosen to evaluate the student's suspected areas of language deficit (Bawayan & Brown, 2022. Speech-language evaluations, unless needed solely for articulation, fluency, or voice, must include at least one comprehensive assessment that evaluates both receptive and expressive language. Although research surmises that the psychometrics of a standardized assessment are vital in determining if it is an appropriate evaluative tool based on the suspected needs of the student, many school-based SLPs routinely select assessments based on their recency and availability (Fulcher-Rood et al., 2018). The most widely used comprehensive assessments by school-based SLPs are the Clinical Evaluation of Language Fundamentals, 5th Edition (CELF-5; Crowley & Bucaj, 2014), followed by the Comprehensive Assessment of Spoken Language (CASL; Coret & McCrimmon, 2015).

Despite their popularity, standardized assessments, and their use in the field of speech-language pathology, have received a fair amount of criticism. For instance, an argument has been made that the standardized evaluation of speech-language ability is inadequate in analyzing the complexities and nuances in everyday communicative contexts (Connecticut Department of Education, n.d.). Standardized assessments can also yield inaccurate scores if the administering practitioner uses an assessment not in the student's dominant language. EBP suggests that clinicians should be aware that standardized measures can be affected by dialectal differences,

poverty, and cultural bias (Ireland & Conrad, 2016). For example, the CASL contains a subtest on idioms, a form of figurative language that is culturally dependent. Additionally, the CELF-5 evaluates a student's pragmatic language ability based on norms that are almost exclusively influenced by Western social standards (Crowley & Bucaj, 2014). Comprehensive language assessments also often do not consider cultural and geographical dialectal differences (Farrugia-Bernard, 2018).

Validity of Evaluation Results, Subjectivity, and Eligibility for Services

Following the end of the necessary evaluative processes, the CST discusses the student's overall performance. During this time, the standardized scores obtained from the various formal measures are used to determine the presence of a learning disability, its severity, and if a special education classification is warranted. The latter determination is exceptionally important, as it could significantly alter the educational track and trajectory of the student (Truscott et al., 2010). Although the decisions to provide a student with special education services are made collectively by the CST, the presence of a developmental language disorder (DLD) is determined by the standardized measures obtained from the SLP (Reilly et al., 2014).

Speech or Language Impairment

DLD is a neurodevelopmental condition that adversely affects a student's abilities related to learning, comprehension, and using spoken language (Orrego et al., 2023). Under IDEA (2004) children who are diagnosed with DLD qualify for special education when they have a language impairment, their educational performance is adversely affected, or they require special instruction (McGregor, 2020). Students with DLD who qualify for special education usually receive a speech or language impairment (SLI) classification (Orrego et al., 2023). Clinically, language impairment that does not affect articulation or fluency is often called *specific language*

impairment. Additionally, in some states, such as New Jersey and Massachusetts, the classification of communication impairment (CI) is used instead of SLI (N.J.A.C. Section 6A:14-3.5, 2015; M.A.C. Section 603 CMR 28.00, n.d.).

The speech component of the SLI classification is based on a student's articulation, voice, and fluency. While these areas are formally assessed by the clinician, informal measures, such as how they affect the student's speech intelligibility within the classroom, are critical in determining whether an SLI classification is warranted (Fabiano-Smith, 2019). Students with impaired speech may be denied classification if their deficits are not adversely affecting their academic performance (Georgan et al., 2022).

In most states, the language impairment aspect of the SLI classification lacks a quantifiable definition. In New Jersey, students with language impairments adversely affecting their academic performance are classified as CI. A CI classification requires quantifiable measures obtained from two standardized assessments (New Jersey Administrative Code 6A:14, 2015); however, most states allow for the results from informal measures such as language samples, parent/teacher interviews, and classroom observations to determine the presence of language impairment, and in turn, an SLI classification (Fulcher-Rood et al., 2018).

The formal measures of a speech-language evaluation are often standardized assessments chosen based on their recency and availability, as opposed to the characteristics of the student (Fulcher-Rood et al., 2018). If tests are psychometrically weak or incompatible with the needs of the child, the results may yield an inaccurate representation of the student's abilities (Fabiano-Smith, 2019). Consequently, there is disagreement among school-based clinicians as to how standardized scores should be interpreted (Girolamo et al., 2022).

Recommendations: Service Delivery Models and Frequencies

EBP requires the clinician to consider the diverse needs of the student, clinical expertise, and the latest research when making recommendations. Although all three facets of EBP are in a constant state of evolution, recommendations concerning the delivery and frequency of speech-language services have seen minimal change since becoming part of all public elementary schools in 1966 (Duchan, 2010). In fact, modern recommendations mirror the recommendations that schools made for communication services over 100 years ago (Schraeder & Seidel, 2022).

Early Service Delivery

Although speech-language services were not mandated for public-school districts until 1966, schools in the United States began providing students with classes to support communication deficits in the late 19th century. The first class of this kind originated in Boston, Massachusetts, in 1895. Over the next few decades, the idea of "correction classes" for student speech slowly spread to school districts in big cities throughout the United States (Duchan, 2010; Schraeder & Seidel, 2022). Following the lead of Massachusetts, the next states to offer speech correction classes were Wisconsin, Illinois, Michigan, Ohio, and New York. In New York, during the early 20th century, the first school-based speech clinicians were known as *special teachers* or *speech correctionists*, who traveled between schools and provided students with speech therapy (Duchan, 2002). The itinerant speech correctionist would service caseloads of approximately 40 students (Duchan, 2010). The speech correctionist would pull students out of their classrooms (the pull-out service delivery model), and into small groups of no more than 10. The sessions of small-group instruction were 30 minutes in length and would focus on remediating deficits pertaining primarily to fluency. Speech correctionists were encouraged to see their students twice per week, when possible (Fletcher, 1928).

The pull-out service delivery model utilized in New York during the 1920s received criticism shortly after its inception. Early literature on speech intervention identified the potential problem of removing students from their classrooms to receive services that had nothing to do with the academic curriculum. There were also questions regarding the arbitrary frequency of service delivery and doubts as to whether one or two classes per week were sufficient to remediate speech-related disorders (Fletcher, 1928). Students were assessed, treated, and dismissed by a single speech correctionist without input from other stakeholders (Schraeder & Seidel, 2022). As early as 1926, the Department of Speech Correction of New York City Public Schools criticized the modality by which speech services were being provided and expressed the desire for an alternative treatment to students being removed from their classes; however, the substantial number of students needing services made modifications to their delivery difficult (Fletcher, 1928).

Modern Service Delivery

For modern school-based SLPs, recommendations concerning the service delivery model, intensity, and frequency of speech-language services are influenced by the domains of the student, clinician, and workplace. For the student, recommendations concerning the frequency, and modality of services should consider their characteristics, the severity of their deficits, and their needs (Brandel & Frome Loeb, 2011). Regarding the clinician's domain, professional responsibilities and their perceived manageability could impact recommendations for intervention (Katz et al., 2010). Within the workplace, recommendations can be influenced by factors such as support from school administrators, the caseload size of the SLP, and the CST (Brandel & Frome Loeb, 2011).

Within schools, speech-language services are often provided through four different delivery models: individual, small group, integrated group, and consultation. Individual and small-group sessions generally take place within the school but outside of the classroom (Brandel, 2020). The integrated group involves the clinician going into the classroom of the student to provide direct speech-language services (Elksnin & Capilouto, 1994). Finally, consultation requires the clinician to consult with teachers of the student, rather than the student themself (Brandel, 2020).

The pull-out service delivery model pioneered by New York City Public Schools in the 1920s is the most common service delivery model used by school-based SLPs today. The current recommendations concerning the frequency and duration of services are also remarkably like those used almost 100 years ago (Brimo & Huffman, 2023). Sessions are most often twice per week with each session lasting 21–30 minutes (Mullen & Schooling, 2010). Despite the numerous variables that factor into the decision-making processes for speech-language recommendations, the vast majority of school-based SLPs report that student characteristics play the most significant role; however, the lack of variance in service delivery models, or frequencies, suggests that student characteristics do not necessarily influence service delivery (Brandel, 2020). Still, in some school systems, there is evidence to suggest that the frequency and modality of services fluctuate based on the classification of the student (e.g., specific learning disability [SLD], specific language impairment) or the severity of their impairments (Mullen & Schooling, 2010).

Reductions in the Frequency and Intensity of Services

The frequency and intensity of services generally decline after elementary school (Katz et al., 2010). Decisions to enact these decreases are often made without the support of a formal

assessment (Sylvan, 2016). This trend is particularly problematic for students with DLD, who often struggle with comprehending and using language throughout their academic careers. As the complexity of the curriculum increases with the student's grade level, an argument can be made that the frequency of speech-language services should increase instead of decrease (Ehren, 2002).

Students who are diagnosed with DLD in elementary school typically face lifelong communicative challenges in academic, familial, social, and professional contexts (Orrego et al., 2023). In fact, students who present with DLD in kindergarten often remain linguistically behind their peers throughout grade school (Tomblin et al., 2003). Research asserts that with appropriate support, such as speech-language services, students with DLD can improve their language abilities significantly. Although these improvements limit linguistic disparities between students with DLD and their peers, gaps between the groups increase as the curriculum grows in complexity (Orrego et al., 2023).

For post-elementary students with DLD, the continuation of speech-language services with a clinician may include a change in the service delivery model. For instance, secondary students are often transitioned from direct to consultative speech-language services (Cahill et al., 2023). Consultation is a less intensive mode of school-based service delivery that involves the clinician providing services indirectly through work with the teacher, as opposed to directly with the students (Watson et al., 2020). Although advantageous in terms of allowing the student to receive services while remaining in the classroom, in secondary school, consultation services are frequently implemented without appropriate outcome management (e.g., clearly defined goals and effective ways to measure their achievement; Cahill et al., 2022) or the availability of ideal collaborative partners (e.g., teachers who are with the student for more than one period a day;

Larson et al., 1993). While there is some evidence to support its effectiveness at the secondary level, most research into the provision of consultation services has focused on elementary students (Starling et al., 2012).

Dismissal From Speech-Language Services

According to Section 1414 of IDEA (2004), students with special education classifications are eligible for reevaluation every 3 years. This policy would apply to any student with an SLI classification, or who receives school-based speech-language services. Based on the results of this evaluation, if the student presents with language skills in the average range of functioning, they may be dismissed from services. Additionally, dismissal from services can occur if the child has achieved their speech-language goals (ASHA, n.d.-f). Speech-language services can also be discontinued if the parent revokes consent for services (Sylvan, 2014).

Although ASHA provides guidance for appropriately dismissing students from school-based speech-language services, the organization cautions clinicians to be aware that the adverse effects a language disorder has on educational performance goes beyond academics (ASHA, n.d.-g). While many states view the need for speech-language services based on how deficits are adversely affecting educational performance, research argues that this criterion is ambiguous and difficult to quantify (Sylvan, 2016).

Given the persistent challenges faced by students with DLD, there are conflicting views in the literature on when, if ever, it is appropriate to discontinue their speech-language services (Sylvan, 2014). For students with language disorders, ASHA (2023) suggested that school-based SLPs must make evidence-based decisions concerning how long the benefits of treatment can reasonably be expected. Thus, for school-based SLPs, dismissal from speech-language services is considered once the language deficits hindering the academic progress of the student have

been remediated (Steppling et al., 2007); however, for students with language disorders, deficits will frequently reemerge as the curriculum becomes more complex (Sylvan, 2014). Therefore, some research has found that services for students with DLD should be provided throughout all grade levels (Comkowycz et al., 1987; Orrego et al., 2023). Finally, the literature has indicated that there are some clinicians who dismiss students based on vague criteria (e.g., "it felt like it was time") or rescind recommendations for dismissal to avoid parental conflict (Sylvan, 2014).

Why Evidence-Based Practices and Recommendations Are Important

According to the U.S. Department of Education (2010), children with disabilities are entitled to free and appropriate public education (FAPE). This pertains to the provision of related services, such as speech-language therapy, for students with communication disorders (U.S. Department of Education, 2010). Through the provision of FAPE, school districts increase the likelihood that their students will maximize their educational performance (Kaufman & Blewett, 2012); however, the eligibility criteria for speech-language services can vary across states, school districts, and individual clinicians (Ireland & Conrad, 2016). Therefore, Research Question 1 is: How is eligibility for school-based speech-language services determined? In selecting informal and formal measures to determine the eligibility of a student for speech-language services, the clinician must use EBP by considering their clinical expertise, the needs of the student, and the best available research expertise (Higginbotham & Satchidanand, 2019). Research has shown, however, that there are substantial differences among clinicians as to what measures are included in their assessment processes (Caesar & Kohler, 2009; Klatte et al., 2022). The literature also has indicated that standardized evaluations are often inappropriately used and misinterpreted. This can lead to students being misidentified as having a language disorder (Daub et al., 2021).

The results from speech-language assessments are used by clinicians to make recommendations for services. Therefore, it would seem that erroneous or inconsistent evaluative procedures could result in misdiagnosing language disorders and inappropriate recommendations for services (Ireland & Conrad, 2016). Therefore, Research Question 2 is: How do evidence-based practices influence clinical decision-making processes concerning school-based speech-language assessments and subsequent recommendations? Although clinicians report that their recommendations are evidence-based, their lack of variance suggests that the needs of the student are often not the main priority in decision-making processes (Brandel, 2020). Additionally, although EBP is in a perpetual state of evolution (Hall-Mills et al., 2023), recommendations from school-based SLPs have not changed significantly in nearly 100 years (Duchan, 2010).

Finally, while the literature has suggested that DLD frequently results in students experiencing lifelong communicative challenges, there is disagreement regarding when or if their speech-language services should be discontinued (Orrego et al., 2023; Sylvan, 2016). Among clinicians who favor the eventual dismissal of students with DLD, there are conflicts concerning the criteria that should be used to make the high-stakes decision (Sylvan, 2016). Thus, the third and final research question is: how do evidence-based practices influence decisions to dismiss students from direct speech-language services?

Theory of Action

For students with DLDs, properly addressing their communication needs often requires skillsets that extend beyond those of general or special education teachers. Therefore, school-based SLPs who rely on EBP to make decisions concerning evaluative processes, eligibility, and recommendations maximize the student's ability to learn in the least restrictive environment

(LRE; Giangreco et al., 2010). Learning in the LRE has been found to improve student social and developmental outcomes, overall quality of life, and academic achievement (Barrett et al., 2020).

Definition of Terms

American Speech-Language-Hearing Association (ASHA): The national credentialing association for SLPs. ASHA-certified professionals hold the Certificate of Clinical Competence (CCC; ASHA, n.d.-a).

Certificate of Clinical Competence (CCC): A certification provided by ASHA for speech-language pathologists who have voluntarily met rigorous academic and professional standards to ensure that they have the expertise to provide students with high-quality clinical services. To keep this certificate in compliance, clinicians are required to accrue 30 professional development hours every 3 years (ASHA, n.d.-c).

Evidence-Based Practice (EBP): The integration of clinical expertise, evidence, and the perspectives of students and families. EBP is used to help school-based SLPs make informed decisions and provide high-quality services (ASHA, 2004).

Least Restrictive Environment (LRE): The educational setting where students with disabilities learn alongside their non-disabled peers. According to Sec. 300.114 of IDEA (2004), students with disabilities should be educated in environments with their non-disabled peers as often as possible.

Psychometrics: Data, often found in the administration manual of a standardized assessment, that provide evidence for the validity and reliability of an evaluation. Psychometric properties include an evaluation being objective, unbiased, non-discriminatory, standardized, reliable, and appropriate to evaluate specific skills (Carignan, 2023).

School-Based Speech-Language Pathologists (SLPs)/Clinicians/Practitioners: Professionals who assess and treat students with communication disorders in the school setting. Through the treatment of receptive, expressive, and pragmatic language deficits, these professionals help students interact within their environments and with others.

Standardized Assessment/Evaluation: Empirically created evaluation tools with statistical reliability and validity. Standardized tests require all test takers to answer the same test items in the same way. The test is then scored in a consistent, or standard way. Standardized assessments allow clinicians to determine the level of a student's speech or language skills, relative to students of a similar age or grade (Westby, et al., 2003).

Outline of the Dissertation

This dissertation is divided into five chapters. The current chapter, Chapter 1, was used to provide the reader with an understanding of the differences between speech and language, as well as a brief overview regarding the role of the SLP in public schools. The chapter went on to define EBP and explain its role and importance in the decision-making processes of school-based SLPs.

Chapter 2 will provide a literature review on the history and role of school-based SLPs. The chapter will also provide research concerning EBP, how they influence school-based speech-language assessment processes, and their role in determining student eligibility for services. The literature review will further explore different modalities for speech-language services, and how EBP helps determine their frequency and intensity. Finally, research regarding the barriers to EBP, resultant consequences, and how the problem can be addressed will also be addressed in this chapter.

The third chapter will describe the methodology that will be used to complete the present study. This will include a detailed description concerning the purpose and design of the study. The chapter will also identify the number of participants, the procedures used for their recruitment, the criteria for their inclusion, and information pertaining to their demographics. Chapter 3 will also discuss how the data for the present study were collected, what instruments were used, and how the data were analyzed.

Chapter 4 will present the findings of the present study. These findings will include the concepts and major themes that were revealed through data analysis. Using these concepts and themes, Chapter 4 will answer the research questions of this study and provide a summary of its findings.

The fifth and final chapter of this dissertation will be used to discuss and interpret the results presented in Chapter 4. This analysis will compare, contrast, and connect the findings of this study with past research. Chapter 5 will also present the limitations of this study, as well as recommendations for future practice and research.

CHAPTER 2

REVIEW OF RELATED LITERATURE

For students with a special education classification, research has shown that learning in the LRE positively promotes social and developmental outcomes, quality of life, and academic achievement (Barrett et al., 2020). According to Individuals With Disabilities Education Improvement Act, Section 300.114, LRE means that "to the maximum extent appropriate," children with disabilities must be educated with their nondisabled peers (IDEA, 2004). For students with DLDs, such as SLI, properly addressing their communication needs often requires the support of an SLP. Within public schools, the provision of speech-language services by ASHA-certified SLPs increases the likelihood that students with DLDs will be able to successfully learn in the LRE (Giangreco et al., 2010).

This chapter will provide a literature review on the history and role of SLPs in public schools. The chapter will also explore the literature surrounding EBP, how it influences school-based SLPs' evaluation processes, and its role in determining student eligibility for speech-language services. Further, the literature review will provide research regarding the different modalities of speech-language services, what students benefit from them, and how EBP helps determine their frequency and intensity. Finally, research regarding the barriers to EBP, the resultant consequences, and how the problem can be addressed will also be explored in this chapter.

School-Based Speech-Language Pathologists

For more than a century, public schools in the United States have recognized the need to help students with language and communication challenges. Such challenges include deficits in the areas of language, articulation, fluency, and voice (Duchan, 2010). To address the needs of

students with speech or language disorders, public school districts employ SLPs. School-based SLPs must have an SLS standard certificate. To obtain an SLS standard certificate, an individual must receive a master's degree in speech-language pathology from a regionally accredited college or university. Individuals must also pass a state-approved test of comprehensive knowledge in speech-language pathology. For instance, an individual wishing to obtain their SLS standard certificate in the state of New Jersey would have to pass the PRAXIS II: Speech-Language Pathology (5331) exam (ASHA, n.d.-k).

The History of Speech-Language Therapy in Schools

School-based communication services in the United States originated in Boston, Massachusetts, in 1895. Started by Dr. Edward Hartwell, the director of Boston's physical training program, in collaboration with Boston Normal School, these initial speech classes were experimental and used to treat small groups of students who stuttered (Osgood, 2000). In 1908, Dr. John F. Reigart, principal of Public School #2 in New York City, New York, organized a speech class for children in his school who struggled with fluency. In 1910 the public schools in Chicago and Detroit hired teachers specifically to work in school-based speech centers, which were designed to support students with communication needs (Duchan, 2010). By 1918, each of the 48 states had passed compulsory education laws that entitled all American children ages 6–21 to a free public education (Steinhilber & Sokolowski, 1966). As attendance at school became mandatory, most school districts in major cities employed speech clinicians (Duchan, 2010).

The first school-based speech-language specialists were often general education teachers; however, it was difficult to decide what knowledge and skills teachers needed to have to provide the services (Duchan, 2010). According to a document analysis by Duchan (2010), it was recommended in the early days of the provision of speech classes that speech specialists have at

least 1 year of experience teaching in a public school general education classroom (Duchan, 2010). It was also recommended that teachers complete college-level courses in the areas of elocution, psychology, phonetics, stuttering, and cognitive deficits (Swift, 1918). Training in these areas parallels requisite coursework for modern school-based SLPs in the areas of articulation, fluency, and cognitive development (St. Louis & Lass, 1981; Sturm & Seery, 2007); however, prior to 1952, although most speech specialists received training (e.g., college courses on how to remediate communication deficits), ASHA did not have any specific certification requirements. By 1965, ASHA established the CCC, a certification that required the attainment of a master's degree or a degree equivalency (ASHA, n.d.-e). The following year, all public elementary schools were mandated to provide speech-language services when needed (Duchan, 2010).

Role of the School-Based Speech-Language Specialist

An SLP who is certified by ASHA can work in a variety of settings. Such settings include healthcare facilities, homes, and schools (Kalkhoff & Collins, 2012). Concerning schools, in 2010, an ad hoc committee formed by ASHA created an official policy that specified the roles and responsibilities of SLPs. According to the policy, SLPs were important members of the school community. In the school setting, SLPs are responsible for assessment, program design, Medicaid billing, report writing, and complying with federal and state mandates related to individualized education plans (IEPs). SLPs must also work with other stakeholders in the school community, such as general and special education teachers, paraprofessionals, occupational therapists, and physical therapists (Ogletree, 2017). Through collaborative efforts with various members of the school community, school-based SLPs can maximize the likelihood that the

provision of their services will optimally support educational outcomes (Farquharson et al., 2020).

School-based SLPs specialize in the treatment of students with both speech and language disorders. It is important to note, however, that ASHA did not become the *American Speech-Language-Hearing Association* until 1978. Hence, the letter *L* is absent from the acronym of the name of the national organization for SLPs (McNeilly, 2011). Thus, within school communities, the roles and responsibilities of the SLP are often misunderstood. Frequently, speech-language interventions are referred to as "speech," assuming it deals with articulation, fluency, or voice disorders. Stakeholders often do not realize that school-based SLPs treat students challenged with deficits concerning the comprehension and utilization of language, not just articulation, voice, and fluency (Reed et al., 2019). In fact, according to a survey of 409 school-based SLPs, children with language disorders account for a significant percentage of the caseloads of school-based SLPs (Caesar & Kohler, 2009). Therefore, SLPs must advocate for themselves as critical members of the intervention team for students with language deficits (Reed et al., 2019).

To avoid misunderstanding concerning their professional responsibilities in the school community, SLPs have an obligation to proactively inform stakeholders of their critical role in the educational outcomes of students. SLPs can accomplish this through student advocacy, mentorship for colleagues concerning their roles and responsibilities, and the provision of parent training and support (ASHA, 2010). SLPs must also allocate time in their schedules to consistently collaborate with colleagues while providing strategies, based on the latest research evidence, to remediate linguistic deficits. This approach to collaboration was detailed in a study by Farquharson et al. (2020), which found that such measures, in conjunction with consideration of optimal service delivery, can directly impact successful student outcomes. Further, an

understanding of an SLP's role in the school community helps to create appropriate student goals and objectives, as well as the supports processes pertaining to annual evaluation plans (Reed et al., 2019).

Evidence-Based Practice and School-Based Speech-Language Pathology

Over the past three decades, increased expenditures in healthcare and the management of health services have led to several reform policies, enacted to reduce spending. As a result, SLPs were tasked with proving their value by demonstrating the effectiveness of their treatment. In response to insurance providers and other parties paying for their services, SLPs had to provide scientific evidence supporting the nature, frequency, and intensity of their treatments (Mullen & Schooling, 2010). In response, in 1993 ASHA formed a group of volunteers within the association called the *Task Force for Outcomes and Cost Effectiveness*, later known as the *Task Force*. Their job was to find evidence supporting the efficacy of speech-language intervention. After finding limited empirical information on the effectiveness of speech-language intervention, the Task Force spent 2 years creating a basic national database to compile clinical evidence indicating the importance of speech-language pathology (Pietranton & Baum, 1995). Although the need for evidence-supported treatment began in adult care, its need in school-based speech-language pathology was also recognized (Hoffman et al., 2013).

Early school-based speech-language interventions in the 20th century were informally based on assumptions of what was causing the student's problems. This was particularly true for fluency disorders. For instance, stuttering was thought to be an emotional disorder that could be successfully treated by "re-educating" the emotions of the afflicted student (Duchan, 2010). In 1925, a group organized by physicians, scholars, and public school administrators called the *American Academy of Speech Correction (AASC)* formed, with the primary purpose of

promoting scientifically organized work in the field of speech correction. This group would later become the ASHA (McNeilly, 2011). In the early 2000s, ASHA began to promote the application of an EBP model to the discipline of communication sciences and disorders. This triangular model addresses recommended contemporary practice in speech-language pathology. According to the model, clinicians, when evaluating or making recommendations, must consider the best external evidence available, consider client and other stakeholder perspectives, and apply their own clinical knowledge and experience. This model does not include practice-based evidence, or performance data gathered by the clinician, in its definition (Dollaghan, 2007).

The obligation to use research-based evaluation and intervention techniques is supported by federal regulations. Such regulations include the Every Student Succeeds Act of 2015 and the Individuals with Disabilities Education Improvement Act of 2004 (IDEA, 2004). Research has supported the standpoint that most school-based clinicians recognize the importance of research-based practices and try to remain up to date on research concerning effective techniques concerning speech-language assessment and treatment. In fact, a 2023 study that surveyed 564 school-based SLPs on the amount of time that they spent on EBP found that since 2013, SLPs have increased the amount of time that they spend each week on researching EBP (Hall-Mills et al., 2023). The researchers further noted that the range of 30 minutes to 4 hours that the responding SLPs reportedly spent on EBP each week might not be enough to remain fully informed about the latest research in the field (Hall-Mills et al., 2023).

The American Speech-Language-Hearing Association's Prioritization of Evidence-Based Practice

Since 2004, ASHA has emphasized the need for school-based SLPs to integrate EBP into their clinical decision-making processes (Robey et al., 2004). School-based SLPs, according to

ASHA must continuously, based on the evolution of EBP, evaluate the effectiveness of their services (ASHA, 2004). Thus, modern clinicians are tasked with selecting evaluative protocols and recommending services based on accuracy and effectiveness that are scientifically supported by research. Using EBP, school-based SLPs use informal and formal measures to determine the presence and severity of language disorders (Hall-Mills, 2023; Selin et al., 2019). The use of EBP in school-based SLP decision-making processes is a stark contrast to early communication-related services that were provided by public schools during the late 19th century and early 20th century. During these periods, speech-language services were implemented with minimal research-based support (Duchan, 2010). Despite ASHA's prioritization concerning the utilization of EBP by modern-school-based SLPs, there is conflicting evidence on how consistently it is being used to evaluate and treat students with communication deficits (Hall-Mills, 2023; Selin et al., 2019).

Students Receiving Speech-Language Services

DLD is a neurological condition that, without brain damage, intellectual disability, or hearing impairment, severely affects an individual's ability to learn, comprehend, or utilize language (McGregor, 2020). Students with DLD are often found eligible for special education services under the classification of SLI (Ireland et al., 2013). In some instances, students with DLD may receive a classification of SLD rather than SLI (McGregor, 2020). Although both classifications involve a linguistic component, the former refers primarily to academic hard skills, while the latter specifically to language and communication (Georgan et al., 2022).

Speech or Language Impairment

SLI is a classification used in special education. An SLI classification indicates the presence of a communication disorder that adversely affects education performance due to

deficits in articulation, voice, fluency, or language (Georgan et al., 2022). In special education, SLI is the classification used for students with speech sound disorders, fluency disorders, voice disorders, and specific language impairments (Evans & Brown, 2016).

Statistics on the Prevalence of Speech or Language Impairment

According to the National Center for Education Statistics, in 2017, for students served under IDEA, Part B, SLI was the most common disability category among children ages 3–5. Further, it was the second most common disability among students ages 6–21. Thus, in 2017, approximately 19%, or 1.3 million students between the ages of 3–21, who were served under IDEA, Part B, had an SLI classification (McFarland et al., 2017). These numbers were commensurate with those produced by the organization in 2021. During the 2020–2021 academic year, 15%, or 7.2 million public school students were served by IDEA. Of the 7.2 million students, 19% had classifications of SLI (Irwin et al., 2021). Additionally, according to the National Institute on Deafness and Other Communication Disorders, in the last 12 months, 5% of children from the ages of 3–17 in the United States have had a speech disorder, and another 3.3% have had a language disorder that lasted more than one week (National Institutes of Health, 2016).

Comorbidities of Speech or Language Impairment

Students with SLI classifications frequently demonstrate deficits in multiple areas of development. A literature review conducted by Hill (2001) found high rates of comorbidity between SLI and cognitive impairment. Further, the results indicated that deficits in motor planning and executive functioning were frequently present in individuals with SLI (Hill, 2001). As previously mentioned, SLI can be experienced by students with SLD classifications (McGregor, 2020). The ability to understand and use language can also be impaired in

individuals with special education classifications such as autism spectrum disorder (ASD), other health impairment (OHI), developmental delay, intellectual disability, emotional disturbance, multiple disabilities (MD), and hearing impairment (Georgan et al., 2022).

Evidence-Based Speech-Language Assessment

In accordance with EBP, school-based SLPs are encouraged to use empirical data for clinical decisions. These decisions include the selection of standardized assessments by evaluating the test's psychometric properties, such as reliability, validity, and accuracy (Betz et al., 2013). The formulation of appropriate speech-language goals and treatment that will facilitate their achievement depends on completing an accurate assessment (Girolamo et al., 2022). A proper evaluative process helps SLPs determine the existence of a language disorder and its severity. Caesar and Kohler (2009) found that the procedures utilized by SLPs for the assessment of children with suspected language impairments consist of measures from two basic categories: standardized or formal procedures, and non-standardized or alternative language assessment (Caesar & Kohler, 2009).

There is a lack of uniformity among school-based SLPs concerning the processes involved in a speech-language assessment (Caesar & Kohler, 2009). Given the unique characteristics of students that school-based SLPs evaluate, a variety of testing procedures is expected (Girolamo et al., 2022); however, there is a lack of information concerning the specific assessment procedures regularly implemented by school-based clinicians. As such, it is difficult to determine the quality of child language assessments, as well as the degree to which EBP is being implemented in their facilitation (Caesar & Kohler, 2009).

Formal Measures

Formal measures utilize standardized assessments. According to ASHA (n.d.-l), standardized assessments are empirically developed evaluations with statistical validity and reliability. These assessments require all takers to answer the same questions and complete the same tasks. The items on these evaluations are scored in the same way, which allows for comparisons of relative performance for both individuals and groups of individuals (ASHA, n.d.-l). Standardized measures also provide information concerning how a child's language is developing relative to larger groups of children with typical language development (Owens, 1999). The types of standardized assessments are norm-referenced and criterion-referenced (ASHA, n.d.-b). While formal measures can allow clinicians to obtain a comprehensive view of a student's language ability (Kemp & Klee, 1997), research has suggested that evaluations administered in new settings, with unfamiliar examiners, may be psychometrically inappropriate (Fulcher-Rood et al., 2018; Schraeder et al., 1999).

The literature also has shown that SLPs favor standardized measures, rather than informal measures, as their completion is more time efficient and they provide a holistic view of a student's language capabilities (Fulcher-Rood et al., 2018). A study by Fulcher-Rood et al. (2018) examined the rule-based systems that school-based SLPs use to evaluate the language development of school-aged children. The researchers surveyed 39 school-based SLPs across the United States. According to the study's findings, 16 out of the 39 surveyed stated they used a standardized measure to assess a specific language skill while 14 SLPs used them because their district required them to do so. Further, 23 of the responding SLPs specified that eligibility for services was based solely on standardized measures, while 7 reported no set criteria for eligibility (Fulcher-Rood et al., 2018). These findings were supported by Girolamo et al. (2022),

who found that most clinicians utilize standardized measures to determine eligibility for services and to properly gauge a student's current abilities as they relate to specific areas of speech-language proficiency.

The requirement for a school-based SLP to use standardized measures in their evaluative process is one that fluctuates from state to state. Many states do not require SLPs to use standardized measures in their assessment processes. Other states that require standardized assessments leave specific guidelines on their utilization to local school districts (Ireland & Conrad, 2016). In a 2013 study, Betz et al. investigated which standardized measures are most frequently used by school-based SLPs. The researchers also sought to determine what characteristics influenced the decision-making processes of the clinician to choose a given assessment. To do this, the researchers surveyed 364 school-based SLPs working within the United States. In school districts that mandated standardized testing as part of their speech-language evaluation battery, the Clinical Evaluation of Language Fundamentals (CELF) was used regularly by 67% of the participants. The Preschool Language Scales (PLS), the Peabody Picture Vocabulary Test (PPVT), the Receptive One-Word Picture Vocabulary Test (ROWVT), and the Expressive One-Word Picture Vocabulary Test (EOWVT) were all used by at least 60% of the clinicians surveyed (Betz et al., 2013). Even though they are routinely used for a variety of high-stakes purposes, research has shown that results from vocabulary tests often have low validity and reliability (Bogue et al., 2014).

For a standardized measure to have value, it must possess appropriate psychometric properties. Thus, the rationale for selecting an assessment should consider its reliability, validity, and diagnostic accuracy; however, according to Fulcher-Rood et al. (2018), assessments are often selected based on their availability and recency. Based on a literature review of formal

evaluations used to diagnose speech disorders in children, many standardized assessments have psychometric weaknesses that can produce erroneous results (Kirk & Vigeland, 2014). Such weaknesses include the inability to reliably identify the presence of a disorder or to determine that a child is diagnostically within normal limits. Further, evaluations that are psychometrically inappropriate should not be scored or used as a diagnostic indicator (Fabiano-Smith, 2019).

Standardized assessments can also yield inaccurate scores if the administering practitioner uses an assessment that is not in the student's dominant language. EBP suggests that clinicians should be aware that standardized measures can be affected by dialectal differences, poverty, and cultural bias (Ireland & Conrad, 2016). For example, the CASL contains a subtest on idioms, a form of figurative language that is culturally dependent. Additionally, the CELF-5 evaluates a student's pragmatic language ability based on norms that are almost exclusively influenced by Western social standards (Crowley & Bucaj, 2014). Therefore, the overrepresentation of speech and language impairments in children from culturally and linguistically diverse backgrounds may be due, in part, to cultural biases in the evaluation processes (Farrugia-Bernard, 2018). In fact, Laing and Kamhi (2003) found that many of the assessments used by school-based clinicians relied heavily on concepts and vocabulary most often used in White middle-class schools (Laing & Kamhi, 2003). For school-based SLPs, awareness concerning the weaknesses of standardized measures may contribute to the design of an evaluation battery that provides reliable results (Fabiano-Smith, 2019).

Formal tests that are psychometrically sound are valuable components of the assessment battery. These evaluations, however, should never be used independently to identify the presence or severity of a speech-language disorder (Fabiano-Smith, 2019). This finding is commensurate with CFR § 300.306 c i, Determination of Eligibility (2017) of IDEA which requires

practitioners to draw diagnostic information from various sources when making decisions during the evaluation process. Such sources include consideration of past achievement tests, the child's cultural or social background, and their adaptive behavior (IDEA, CFR § 300.306 c i,). Fulcher-Rood et al. (2018) provided evidence that these mandates are not always followed by clinicians in the school setting. In a study on how 14 school-based SLPs interpreted the evaluative outcomes of five case studies, the results indicated that 97% of diagnostic decision-making was based on a standardized test. This finding supports the outcome of the researchers' previous study when they concluded that school-based clinicians may not be using EBP to guide diagnostic decision-making processes (Fulcher-Rood et al., 2018).

Informal Measures

According to ASHA, a proper determination concerning the presence of a speech-language disorder cannot be made without multiple evaluative measures. As part of a speech-language assessment battery, ASHA recommends the use of both formal and informal assessments (ASHA, 2010). Thus, EBP supports the use of informal assessments in conjunction with standardized measures to accurately diagnose disabilities, determine eligibility for services, and design appropriate treatment plans (Ebert & Scott, 2014).

According to a study by Ebert and Pham (2017), informal assessments are useful in deriving multiple linguistic measures from naturalistic settings. It was their assertion that informal measures, as part of a speech-language evaluative battery, complemented standardized outcomes (Ebert & Pham, 2017). Although informal assessments vary among clinicians, research has indicated that they frequently include classroom observations, interviews with parents and/or teachers, language sampling, and dynamic assessment (Caesar & Kohler, 2009). Informal measures are valuable in that they supplement many of the insufficiencies that hinder the validity

of standardized assessments (Damico & Damico, 1993; Laing & Kamhi, 2003; Peña et al., 2001). Informal measures, specifically those that take place in authentic settings, or that require the functional use of language abilities, are often more informative than standardized evaluations (Caesar & Kohler, 2009).

Research supports the notion that standardized speech-language assessments are based on European-American style discourse and life experiences. A survey of 333 school-based SLPs found that informal measures were useful in evaluating the linguistic abilities of Indigenous students. While the study focused on Indigenous students, it concluded that informal measures were critical for appropriately evaluating the language skills of students from any group experiencing educational disparities (Guiberson & Ferris, 2023).

Language Samples

The informal measure used with the highest frequency in the study by Guiberson and Ferris (2023) was the language sample, a finding that was also reported in a study by Fulcher-Rood and Castilla-Earls (2023). In a study that surveyed 382 school-based SLPs across the United States, Fulcher-Rood and Castilla-Earls (2023) found that language sampling was the informal measure used most often in clinical decision-making. The researchers also noted that other informal measures, such as parent and teacher interviews, and classroom observations, were useful in obtaining information about a student; however, they did not significantly contribute to clinical decision-making processes (Fulcher-Rood & Castilla-Earls, 2023). The high frequency with which school-based SLPs use language samples is a finding that is supported by an earlier study by Kemp and Klee (1997). In the study by Kemp and Klee, 252 ASHA-certified school-based clinicians were surveyed, leading to the discovery that 85% of the participants used some form of language sampling in their evaluative processes. Two case studies

by Miller et al. (2016) that explored the use of informal language samples as evaluative linguistic measures for middle and high school students found that they were effective in acquiring language that would be produced in everyday situations. Miller et al. further concluded that language samples were useful as evidence for the validation of clinical practice and stand as a measure that is easy to explain to parents, teachers, and other stakeholders.

Traditionally, language samples require the evaluator to collect at least 50 utterances from the student to appropriately evaluate their semantic and syntactic skills (Heilmann et al., 2010; Pavelko & Owens, 2023). Despite its informal nature, an LSA is a more structured approach to language sample acquisition. Commensurate with traditional language samples, it is recommended that LSAs include a language sample of at least 50 utterances (Miller et al., 2016). Heilmann et al. (2010) used LSA on the language samples of 231 children from 2 years, 8 months to 13 years, 3 months of age. Based on the results of the study, the researchers found that LSA was highly effective in assessing linguistic proficiency and development. The researchers also found that LSA was reliable in evaluating changes in discourse based on linguistic contexts and monitoring changes from intervention (Heilmann et al., 2010). Similar findings were reported by Miller et al. (2016), who found that LSAs can effectively evaluate a student's language proficiency in the areas of syntax, morphology, semantics, verbal facility, and errors in speech.

Despite the potential wealth of information that LSAs can add to the assessment results, research has indicated that many modern SLPs who work with children experiencing language delays do not conduct them (Klatte et al., 2022). According to a study by Overton and Wren (2014), many SLPs consider LSAs time-consuming, and often unfeasible in most professional settings. This finding was supported in a study by Pavelko et al. (2016) that surveyed 1,304

school-based SLPs on their use of LSA. The study found that 71% of the SLPs believed LSAs were too time-consuming to be conducted on a regular basis. Interestingly, 84% of the participants felt that they needed more training in how to analyze language samples (Pavelko et al., 2016). In response to the time constraints impeding school-based SLPs from conducting LSAs, a later study by Pavelko et al. (2020) evaluated language transcripts from 220 children, 3–7 years of age. The researchers found that reliable language samples could be obtained in just 25 utterances, thus limiting the time required for their completion (Pavelko et al., 2020).

Evidence-Based Eligibility Determinations

Determining the need for school-based speech-language services should be based on three prongs of eligibility: Is there a disability? Is this disability affecting the educational performance of the student? Are support services needed for the student to succeed in a general education setting? (Selin et al., 2022). During the initial stages of school-based speech services, there was a nationwide endeavor to assess its demand and consequently validate the employment of qualified speech therapy professionals. Many educational institutions conducted surveys to identify the number and specific children who could potentially benefit from speech therapy services (Duchan, 2010). In other school districts, such as New York City, special teachers were assigned to informally assess the articulation, voice, and fluency of each student entering grade school (Fletcher, 1928). The methods of classifying students descriptively or diagnostically with speech problems during the inception of speech services within the school were unstable. As a result, early professionals in the field worked to standardize assessment measures and establish criteria concerning eligibility for services (Duchan, 2010).

In their textbook *Children's Speech: An Evidence-Based Approach to Assessment and Intervention* (2017), authors McLeod and Baker thoroughly discussed standardized evaluations

and their role in the proper diagnosis and treatment of speech disorders. According to the text, standardized evaluations, when conducted appropriately and with consideration for their psychometric properties, are valuable tools in determining eligibility for services (McLeod & Baker, 2017). This finding was supported in a study by Daub et al. (2021), who generalized the Standards of Educational and Psychological Testing to the field of speech and language pathology. Using the standards, the researchers noted the importance of appropriate evaluative measures but argued that the validity of standardized results is contingent on clinical expertise, informal assessment, and student characteristics. Given the unique attributes of each student, the validity of standardized scores could vary between students, even if they are within the same age demographic (Daub et al., 2021).

Variability in the interpretation of standardized measures can be problematic, given their importance in clinical decision-making (Daub et al., 2021). ASHA does not mandate the use of specific criteria to determine eligibility for speech-language services in the school setting; however, according to ASHA, in public schools, federal, state, and local guidelines determine criteria (Ireland et al., 2016). At the federal level, in accordance with IDEA, a speech-language impairment is defined as a communication disorder, which may include deficits in articulation, fluency, voice, or language, and which adversely affects educational performance (IDEA, 2004). Many states, such as Ohio, Hawaii, Arizona, South Carolina, Tennessee, North Dakota, and Louisiana, use the federal criteria as they are written. Other states, such as Colorado, Oregon, Florida, Virginia, West Virginia, and North Carolina, have additional criteria concerning eligibility for speech-language services. Most states do not mandate standardized measures to determine eligibility for speech-language services (Ireland & Conrad, 2016).

The use of standardized measures to determine eligibility for speech-language services, despite not being mandated by most states, is a required practice in many local school districts (Ireland & Conrad, 2016). In a study that involved phone interviews with 39 school-based SLPs across the United States, all but one reported using standardized measures to help determine student eligibility for speech-language services (Fulcher-Rood et al., 2019). Despite all SLPs reporting that they also used informal measures, when formal measures were implemented, their results determined the eligibility for services. The respondents reported that their criteria for eligibility are determined by the state/local school district. Using these criteria, the majority of SLPs reported students with standardized scores that were 1.5 standard deviations below the norm, or with a severity level of moderate or severe, would qualify for speech-language services. The researchers note that most standardized assessments are not good indicators of severity, nor do they consistently align with cutoff scores set by state or local agencies (Fulcher-Rood et al., 2019).

Evidence-Based Recommendations

In recent years, ASHA has increased its emphasis on the importance of EBP concerning evaluative processes, recommendations for the modalities of service delivery, and frequency. Therefore, EBP regarding these determinations involves consideration of the best available research, clinical expertise, student characteristics, and input from teachers and parents (ASHA, 2004). Based on these variables, the recommendations for both service delivery and frequency are individualized with the goal of effectively addressing the needs of the student, while helping them to succeed academically (Ireland & Conrad, 2016).

Despite the initiatives of ASHA concerning the use of EBP in recommendations, and the abundance of literature that supports its importance, studies have shown that its use in the school

setting is challenging. For instance, a 2011 study that surveyed 2,000 school-based SLPs found that most SLPs reported that their recommendations for services varied based on the student; however, the limited variety of service delivery models, and intervention program intensities indicates that student characteristics may not be the most important consideration when making recommendations (Brandel & Frome Loeb, 2011).

Service Delivery Models

Speech-language support services have traditionally used a pull-out model, where services were provided in a room dedicated to therapy (Mullen & Schooling, 2010). Speech-language services in the therapy room are delivered individually or in small groups (Ukrainetz et al., 2009). In recent years, the in-class, or push-in, service delivery model, where speech-language services are provided by the clinician within the student's classroom, has increased in popularity (Ehren, 2016). Despite the growing use of the push-in service delivery model, the research has indicated that one specific service delivery model should not be used broadly for all students. Decisions regarding the model of service delivery should be made with the individual child's goals and strengths in mind (Farquharson, 2020).

Pull-Out Service Delivery Model

The pull-out service delivery model is the one still used most frequently by school-based SLPs (Brandel, 2020). A study by Mullen and Schooling (2010), which analyzed two National Outcomes Measurement System datasets, found that of the 16,000 children receiving speech-language services, 91% participated in pull-out small-group instruction. The pull-out service delivery model can be beneficial specifically when a clinician wants to introduce a new linguistic concept or target a specific communication skill. The pull-out service delivery model is also

advantageous for role-playing conversations or creating structured communication opportunities (ASHA, 2016).

The pull-out service delivery model, while favored by school-based SLPs, is not without its flaws. For instance, pull-out services make teacher collaboration more challenging and can cause students attending speech-language therapy to miss critical classroom instruction. This can result in treatment having an iatrogenic effect on the student, whereby being taken out of the classroom on a regular basis causes them to fall behind academically (Justice, 2018). Students receiving speech-language services outside of the classroom also frequently participate in activities that fail to involve curriculum-based content. Thus, for the pull-out service delivery model to be successful, SLPs and teachers must consistently collaborate on lesson objectives and student goals (Brady & Kim, 2023). Further, the use of the pull-out service delivery model for the provision of speech and language services has been questioned with the emergence of the regular education initiative and the inclusion movement (Elksnin & Capilouto, 1994).

Push-In/In-Class Service Delivery Model

Over the past decade, push-in, or in-class speech-language services have been used more frequently. The provision of speech-language therapy within the classroom can be more effective than traditional pull-out therapy when specific goals are being targeted. For instance, a student who struggles with voice, articulation, and fluency when speaking in front of their peers may reap little benefit from an intervention that takes place outside of their classroom (Farquharson et al., 2020). A major strength of the push-in service delivery model is that it requires the SLPs to collaborate with teachers in their school. Through effective collaboration, services simultaneously address a student's speech-language needs and generalize target abilities to curriculum-based activities (Ehren, 2016). Research has suggested that services that take place

within the classroom may be more beneficial for the students as they promote the generalization of linguistic progress to more naturalistic settings (Archibald, 2017; Cirrin et al., 2010).

In-class models of collaborative service delivery can take a variety of forms (Zurawski, 2014). For example, the SLP and teacher can teach together in front of the classroom as a team, or in a parallel fashion. The latter would better allow the SLP to support the needs of specific students (Zurawski, 2014). Further, in a study of 40 school-based SLPs who collectively worked with 151 kindergarten and first-grade students, Tambyraja et al. (2014) found that in-class speech-language services, through curriculum-based practice in concepts such as the alphabet, and phonemic awareness, helped support literacy development.

The push-in service delivery model allows the student to remain among their peers to improve their speech-language skills in the LRE (Farquharson et al., 2020). Allowing students to remain in the classroom may help reduce feelings of stigmatization, a possible unintended consequence of singling out students by removing them from their classroom. The phenomenon of SLI and stigmatization was explored in a study by Macharey and von Suchodoletz (2008). Based on the results from 362 questionnaires completed by parents of children with SLI, it was discovered that 50% of them felt like their child was being stigmatized. This outcome may play a role in future behavioral, emotional, and social problems. In a longitudinal study of 136 children by Beitchman et al. (1996), based on self, teacher, and parent reports, students with language disorders at age 5 were three times more likely to struggle behaviorally, socially, and emotionally throughout early childhood. A 1997 study of 73 children with special education classifications found that stigmatization may partly contribute to these later challenges (Carlton-Ford et al., 1997).

Consultation/Indirect Services

Speech-language consultation is a model of school-based service delivery that involves the clinician providing services indirectly through work with teachers, as opposed to directly with the students (Watson et al., 2020). Clinicians who provide speech-language consultation services collaborate with teachers on ways to enhance the communication skills of students through activities to promote student abilities pertaining to the comprehension and utilization of language. Such activities include planning interventions, creating or modifying classroom materials, participating in IEPs, and monitoring student progress (Curran et al., 2022).

Speech-language consultation services can benefit students in several ways. First, they allow the student to improve their linguistic abilities in the LRE. By receiving speech-language services on a consultation basis, students have the opportunity to work on their language skills while remaining with their peers, as opposed to being removed from the classroom for direct intervention (Curran et al., 2022). Second, students who receive consultation services have more opportunities to generalize targeted speech-language goals to academic instruction and situations relevant to everyday life. Finally, consultation services allow the student to receive treatment derived from the collaborative efforts of two professionals, the teacher, and the clinician (Sylvan, 2018). Thus, if true collaboration is achieved, the likelihood of optimal student outcomes should be enhanced (Hartas, 2004).

The effectiveness of speech-language consultation services is supported by research primarily at the elementary level. Such research includes a quasi-experimental study conducted by Mitchell et al. (2022). In the study, which included two school-based SLPs and four third-grade classroom teachers, the researchers found an intervention on curriculum-based vocabulary terms was more successful in classrooms where collaborations among professionals occurred.

Students in classrooms where the teachers consulted for 30 minutes each week with a school-based SLP showed considerable improvement in the ability to define and use target vocabulary terms (Mitchell et al., 2022). The results of Mitchell et al. (2022) were supported by a case study by Curran et al. (2022) on the effectiveness of speech-language consultation services in promoting the reading comprehension abilities of 32 first- and second-grade students. The researchers found that minimizing the intensity of direct services, and increasing teacher training, led to increases in student abilities related to reading comprehension (Curran et al., 2022).

Several challenges come with speech-language consultation services. For instance, clinicians and teachers often have difficulty establishing and maintaining collaborative relationships (Sandgren et al., 2023). Additionally, while research has asserted that consultative services may be most beneficial for students in elementary school, indirect services are used more frequently in secondary school (ASHA, 2016). Further, ASHA does not make any specific recommendations on how consultation services should be provided, how often they should occur, or how long they should last. ASHA also does not provide parameters for how to determine when a student who qualifies for speech-language services should receive consultative as opposed to direct services (ASHA, 2016). Further, while speech-language consultation should be recommended based on the needs of the student, Sandgren et al. (2023) found that such decisions may be due to the grade level of the student, as opposed to their individual needs. The study, which obtained its data from questionnaires filled out by 111 school-based SLPs, found that clinicians who worked with students in Grades 7–9 were five times more likely to recommend speech-language consultation than those working with students in pre-K through Grade 3 or Grades 4–6 (Sandgren et al., 2023).

Frequency/Intensity of Services

The frequency, or intensity concerning the provision of speech-language services should consider the specific needs of the child (ASHA, 2010). Research by Mullen and Schooling (2010) found that recommendations for the frequencies of service within schools are largely homogeneous. Their study, which analyzed over 16,000 students from pre-K to 12th grade from two National Outcomes Measurements System datasets found that most students received speech-language services 2 times per week for 21–30-minute sessions. The outcome of their study also indicated that disparity in service recommendations resulted from differences across school districts, not based on student characteristics (Mullen & Schooling, 2010).

The findings of Mullen and Schooling (2010) were supported by a study conducted by Brandel and Frome Loeb (2011), who surveyed almost 2,000 school-based SLPs to ascertain what factors influence the frequency of services. Despite the SLPs stating that the frequency of their services was based on the characteristics of the student, similar to the study by Mullen and Schooling, Brandel and Loeb found that most SLPs recommended services 1–2 times per week for 21–30 minute sessions. Although students with mild language disorders were more likely to receive speech-language services once per week, there was little difference in program intensity for students with moderate and severe deficits (Bandel & Frome Loeb, 2011). While the available data indicate that student characteristics are not the primary concern in recommendations for frequency of services, there is some variability in intensities based on classification (e.g., speech-language disorder versus SLD), grade level, and severity (Mullen & Schooling, 2010).

A study by Brandel and Frome Loeb (2011) found that school-based SLPs are professionals within the school community who, through the design and implementation of

linguistic interventions, can help students with language impairments access the curriculum. According to the study, which surveyed 1,897 school-based SLPs, recommendations for the appropriate frequency of services can be a critical factor in maximizing student potential for success within the classroom (Brandel & Frome Loeb, 2011). A literature review by Giangreco et al. (2010) on speech-language pathology and its role as a service to support special education programs found that proper recommendations regarding the intensity of therapy can help students optimally benefit from their special education programs in the LRE.

Recent studies have made arguments that the frequency of services is arbitrary and that the *dosage* of speech-language therapy, per session, is significantly more important. Justice (2018) defines dose, in the context of speech-language pathology, as referring to a specific event that contributes to change in the speech-language system of a child. This event can include learning a new concept, such as a misunderstood grammatical form, or attempting to demonstrate a new skill, such as the appropriate articulation of a target phoneme (Justice, 2018). The idea that dosage is more important than session frequency or duration was supported in a study by Byers et al. (2021). In the between-subjects study involving 22 elementary school children receiving speech therapy for speech sound disorders, 11 received 5-minute individual sessions 3 times per week, while 11 children received 30-minute group sessions 2 times per week. After 6 weeks of treatment, it was discovered that both groups made similar gains toward achieving their goals. The results of this study indicated the potential benefits of using alternative service delivery models for speech-language therapy. Further, alternative service delivery models may reduce the amount of time that the student will miss from classroom instruction (Byers et al., 2021).

Evidence-Based Decisions to Discontinue Speech-Language Services

Dismissal from speech-language services in the school setting should be contingent on the three prongs used to initially determine eligibility. Thus, if a disability no longer exists, if it is not affecting educational performance, or if services are no longer needed for classroom success to be attained, a student may be dismissed from speech-language services (Selin et al., 2022); however, disabilities such as DLD, or classified as SLI in educational contexts, are lifelong disabilities that perpetually hinder communication across social, academic, and eventually, professional contexts (Comkowycz et al., 1987; Orrego et al., 2023. Therefore, school-based SLPs often find it difficult to determine when services are no longer necessary (Sylvan, 2016).

Despite the persistent nature of SLI, there is evidence that the provision of speech-language services for students with SLI declines sharply after elementary school. Selin et al. (2022) surveyed 423 school-based SLPs on the effects of their workplace on service provision for students with SLI. Of the 735 students collectively served by the responding SLPs, nearly 70% were in elementary school or younger. Further, only 13% of the students serviced were in high school (Selin et al., 2022). This is significant, considering that students diagnosed with SLI are 5 times more likely than their peers to repeat a grade level by the time they reach 10th grade (Selin et al., 2022). The success highlighted in the study by Selin et al. (2022) is evidence for the continuation of services for students with SLI past elementary school and serves as an example of how unwanted academic outcomes for students with language impairments can be avoided when they are provided with the appropriate support. Such consequences were highlighted in a study by Larson et al. (1993) on the provision of speech-language services in secondary school. The study found that students with SLI classifications who did not continue to receive speech-language services past elementary school were at an elevated risk of leaving school without

achieving competency in basic skills pertaining to communication, reading, and writing (Larson et al., 1993).

A longitudinal case study by Orrego et al. (2023) described the educational journey of Paula, a woman who, due to difficulty with word-finding and sentence formulation, was diagnosed with a DLD in kindergarten. Although she stopped receiving school-based speech-language therapy after first grade, after experiencing academic difficulties, she was found eligible to receive services again in eighth grade. After restarting speech-language services, Paula's grades improved significantly. Paula's academic success continued into high school and college (Orrego et al., 2023).

The conclusions drawn in the studies by Selin et al. (2022) and Orrego et al. (2023) conflict with the findings of Steppling et al. (2007). In their literature review, Steppling et al. explored the federal policies of IDEA, and the organizational policies of ASHA, concerning what qualifies a student for speech-language services, and when dismissal is warranted. Although both sets of policies indicate that students with communication disorders hindering educational performance should receive services, IDEA is concerned primarily with academic achievement. Conversely, ASHA believes educational performance, in addition to academics, encompasses the social and emotional experiences of a student (Steppling et al., 2007).

The literature on communication disorders notes that affected individuals often avoid social interactions and struggle with both establishing and maintaining friendships (Orrego et al., 2023). The research by Steppling et al. (2007) acknowledges the persistent nature of these deficits, but commensurate with the mandates of IDEA, it encourages clinicians to focus on the remediation of challenges that are hindering academic progress. As such, speech-language services should be provided for a reasonable amount of time, with parents and teachers as active

participants in the intervention. Through participation in treatment, it is the hope of the researchers that primary stakeholders will continue to incorporate strategies to enhance the language abilities of the affected student after direct services have been discontinued (Steppling et al., 2007).

Barriers to Evidence-Based Practice

The ability of a school-based SLP to consistently implement EBP is influenced by a myriad of factors. Such factors include both the *workload* and the *caseload* of the clinician (Brandel & Frome Loeb, 2011). Workload encompasses all work-related responsibilities of the clinician, such as time spent on speech-language therapy sessions, writing IEPs, conducting meetings, and additional responsibilities (ASHA, n.d.-d). Caseload, as defined by ASHA, is the number of students that an SLP provides with direct or indirect services. ASHA does not make recommendations regarding the maximum size of an SLP's caseload, explaining that this number is not always indicative of workload (ASHA, n.d.-d).

Brandel and Frome Loeb (2011) argued that the size of an SLP's caseload is a major factor in determining the volume of their workload. Based on the results of their study, which surveyed nearly 2,000 school-based SLPs, Brandel and Frome Loeb found that the size of the SLP's caseload determined the frequency and intensity of services. This deviates from the policies of ASHA and IDEA that require the clinician to make evidence-based recommendations contingent on the needs of the student (Brandel & Frome Loeb, 2011). These findings support the research of Edgar and Rosa-Lugo (2007), who, based on a survey of 382 SLPs, found that caseload affected both their recommendations and their ability to collaborate with other professionals (Edgar, & Rosa-Lugo, 2007).

A descriptive study by Hall-Mills et al. (2023) surveyed 889 school-based SLPs across the United States on how school districts support the implementation of EBP regarding their language assessment and intervention. Based on the results of the study, 30% of the respondents said that their district had no formal guidelines for EBP. Almost half of the SLPs surveyed indicated that they had time in their schedule for EBP. Of those with time in their schedule dedicated to remaining up to date on EBP, 82% reported that they had 4 hours or less each week. This study also found that SLPs with less than 11 years of clinical experience engaged more frequently in EBP than seasoned clinicians. This may be attributed to the relatively new prioritization of EBP in school-based speech-language pathology, as almost 20% of clinicians with more than 10 years of clinical experience reported no formal training in EBP (Hall-Mills et al., 2023).

A systematic review by Archibald (2017) found that school-based SLPs possess skills in supporting students with DLDs that complement those of classroom teachers. Thus, for school-based SLPs, following EBP is strongly contingent on the clinician's ability to collaborate with the classroom teachers of the students they service (Archibald, 2017). However, a lack of formal training adversely affects professional collaboration in terms of assessment and intervention (Brimo et al., 2023; Pfeiffer et al., 2019). A study by Pfeiffer et al. (2019) that surveyed 474 SLPs on interprofessional collaborative practice found that the utilization of EBP was often contingent on the educational background and formal training of the clinician. Clinicians without classroom or professional training using interprofessional collaborative practice were much less likely to utilize it. As a result, the researchers found that school-based SLPs engaged in low amounts of interprofessional collaborative practice during processes concerning evaluation, eligibility, and intervention. Barriers to collaboration included limited amounts of time,

inadequate support from school administration, and resistance from other professionals (Pfeiffer et al., 2019). The findings regarding the challenges SLPs face engaging in professional collaboration were supported by Brimo et al. (2023).

Recent studies have suggested that the provision of speech-language services using the in-class, as opposed to pull-out, model of service delivery could be more beneficial to supporting the language needs of students, while also directly addressing curriculum content (Reed et al., 2019). A descriptive study by Brimo et al. (2023) that surveyed 87 SLPs and 77 teachers found that most participants from both groups viewed professional collaboration and in-class speech-language services positively; barriers to this model of service delivery included a lack of formal training in how it should be implemented and uncertainty concerning what role the SLP plays while working within the classroom of a teacher. Both teachers and SLPs also cited challenges such as scheduling conflicts, time constraints, lack of administrative support, and professional resistance to initiating collaboration (Brimo et al., 2023).

Consequences

Speech-language evaluations are multi-step assessment batteries that can help clinicians determine the presence and severity of a language disorder. The results from these evaluative processes can lead to a student receiving a SLI special education classification and serve as the primary factor in the decision to provide or deny speech-language services. A study by Betz et al. (2013) found that standardized measures were most often referred to when making these decisions. Surveying 364 practicing SLPs, they discovered that many used standardized measures without concern for their psychometric properties. The researchers argued that the utilization of assessments that lack appropriate accuracy, validity, and reliability contributes to students being over-diagnosed with language impairment (Betz et al., 2013).

Erroneously assigning special education classifications to students has significant implications for student well-being and academic achievement outcomes. According to the National Center for Learning Disabilities (2020), children with special education classifications have less access to the curriculum and are denied rigorous learning opportunities. Further, students with special education classifications are more likely to be educated in classrooms separate from their typically developing peers, an occurrence that widens achievement gaps, while adversely affecting graduation rates (National Center for Learning Disabilities, 2020). According to Betz et al. (2013), SLPs can combat this trend by carefully considering the psychometric information of their standardized assessments—specifically, the reference standard used by the developers of the evaluation (Betz et al., 2013).

The findings of Betz et al. (2013) were supported by Fabiano-Smith (2019), who evaluated the psychometric properties of standardized tests for speech sound disorders and compared criterion-referenced with norm-referenced assessments. Like Betz et al., Fabiano-Smith found that many standardized measures for speech sounds were psychometrically weak. Based on the findings of their literature review, Fabiano-Smith argued that criterion-referenced assessments should be used over those that are norm-referenced for more accurate diagnoses of speech disorders (Fabiano-Smith, 2019).

For school-based SLPs, research has shown that high caseloads are often cited as a hindrance to the consistent implementation of EBP (Brandel & Frome Loeb, 2011; Farquharson, 2020). Consequently, clinicians who make recommendations incommensurate with EBP risk further hindering the communication skills of the students on their caseload. According to the literature, clinicians with larger caseloads are more likely to recommend interventions with lower direct service frequencies (Brandel & Frome Loeb, 2011; Edgar & Rosa-Lugo, 2007). A study by

Ukrainetz et al. (2009) reviewed treatment recommendations for 41 kindergarteners receiving school-based speech-language services. The researchers found that, concerning the intensity and frequency of services, recommendations seemed more dependent on factors such as caseload size and the availability of resources, as opposed to an examination of effective treatment schedules (Ukrainetz et al., 2009). Providing language impairment interventions that lack appropriate frequency and intensity may limit the degree to which the student benefits from their special education program (Barrett et al., 2020).

Students with SLI frequently struggle with the comprehension and utilization of language throughout their lifetime (Orrego et al., 2023). However, Selin et al. (2022) found that, of the 423 school-based SLPs they surveyed, only 13% had students who were in high school. Research has suggested that secondary students with SLI could still benefit from speech-language services but recommended that they should be provided through in-class/push-in, rather than pull-out, direct services (Farquharson et al., 2020). However, a study by Brimo et al. (2023) on collaboration between teachers and SLPs found several challenges with this solution. The study, which surveyed 87 teachers and 77 school-based SLPs, found that time constraints and a lack of opportunity to collaborate with teachers deterred school-based SLPs from recommending in-class interventions for secondary students. Clinicians also reported uncertainty about their classroom role and how to support communication needs during academic instruction (Brimo et al., 2023). Failure to appropriately provide speech-language services using in-class, as opposed to pull-out, interventions could contribute to students being prematurely dismissed from speech-language services (Selin et al., 2022). For students challenged with lifelong SLIs, failure to receive proper speech-language services throughout secondary school could hinder the

development of basic skills crucial for success across academic and occupational contexts (Larson et al., 1993).

Addressing the Problem

School-based SLPs and their students will benefit from improved evidence-based assessment and intervention practices. In response to the challenges outlined in this chapter, Daub et al. (2021) proposed a validity framework based on the understanding of three concepts. First, clinicians must decide on the purpose of the assessment, and what its results will be used to determine. This includes a thorough consideration of the individual's abilities and the reported concerns of the parents and the teachers. The SLP must also remember that few assessments can appropriately evaluate a student's linguistic strengths and weaknesses in a comprehensive manner. Therefore, multiple measures should be used before outcomes are considered valid (Daub et al., 2021). These findings are supported by Fulcher-Rood et al. (2018), who found that clinicians often do not consider the validity of their assessments, instead opting to use the most recent evaluation available, as opposed to one that is psychometrically sound (Fulcher-Rood, 2018).

The second concept refers to the idea that ensuring validity is an iterative ongoing process. For example, standardized evaluations may be designed to assess a student's proficiency in specific language domains. A school-based SLP, however, may wish to use an evaluation to determine the presence of a disorder or the effectiveness of treatment. Further, a school-based SLP may choose to administer only a select number of subtests of a comprehensive test battery to ascertain information regarding the ability of a student for certain language-based tasks. The decisions that a school-based SLP makes about how the test will be used may have significant implications for all relevant stakeholders (Daub et al., 2021). The decision as to how test results

are used should also take into consideration the standardization sample, specifically regarding language variation and cultural backgrounds. Evaluations with standardization samples that do not adequately represent critical student characteristics may be inappropriate to report for some students as a formal measure (Bogue et al., 2014). In a study by Bawayan and Brown (2022), 28 school-based SLPs were surveyed as to their clinical decision-making processes. For evaluations where formal assessments have improper psychometric characteristics for the student, the results should be considered informal, and not used for a standardized measure (Bawayan & Brown, 2022).

Finally, validity, as it relates to assessment, helps ensure that evaluative processes yield accurate results, which can contribute to informed clinical decision-making. Therefore, a clinician should use formal and informal measures to collect evidence and support validity in the decision to confirm or dismiss the need for intervention (Daub et al., 2021). Analyzing and incorporating evidence that supports or refutes different clinical decisions is an essential part of the evaluation process (Kane, 2013). This view of the evaluative process is critical for all clinicians, as even evaluations deemed psychometrically appropriate for a particular student would be improper to support certain clinical decisions. Thus, instead of looking for evaluations with perfect validity, SLPs should seek tests that possess evidence relevant to the decisions they must make.

Summary

This chapter provided a literature review on the history of SLPs in public schools, their responsibilities, and the role of EBP in their decision-making processes. Such processes addressed in this chapter were those pertaining to student eligibility for speech-language services, evaluation batteries, recommendations, and dismissal. The chapter also explored

different modalities for the provision of speech-language services, such as within the classroom setting, (e.g., push-in/in-class services), and services provided outside of the classroom (e.g., pull-out services). Concerning these services, Chapter 2 examined how and how EBP helps determine their length, frequency, and intensity. Finally, barriers to EBP, the detriments to student outcomes, and potential solutions were also addressed in this chapter.

The methods implemented to complete the present study will be described in the next chapter. Chapter 3 will explain both the purpose and design of the study. The third chapter will also provide information concerning the number of participants, how they were recruited, and the criteria for their inclusion. Additionally, Chapter 3 will address how the data were collected and analyzed, as well as the instruments that were used in this study.

CHAPTER 3

METHODOLOGY

Statement of Purpose

The purpose of this study was to identify how eligibility for public school-based speech-language services is determined, as well as how EBP influences evaluative processes, recommendations, and dismissal from services. Although there have been studies on how much time school-based clinicians spend researching EBP each week, few have attempted to decipher the role that it plays in the decision-making processes of school-based SLPs. Further, most literature on the decision-making processes of school-based SLPs relies on surveys to acquire data, as opposed to one-on-one interviews. Although surveys are more advantageous for researchers looking to acquire large amounts of data, the interview approach used for this study resulted in the elicitation of detailed answers that allowed for the research questions to be answered.

Research Questions

1. How is eligibility for school-based speech-language services determined?
2. How do evidence-based practices influence clinical decision-making processes concerning school-based speech-language assessments and subsequent recommendations?
3. How do evidence-based practices influence decisions to dismiss students from direct speech-language services?

Research Design

A qualitative research design was used to understand how school-based SLPs determine student eligibility for speech-language services, as well as the role EBP plays in the processes of

evaluation, making recommendations, and determining dismissal from services. Qualitative research is an effective approach to answering "how" questions. It also allows for a deep understanding of stakeholder experiences and their contexts (Cleland, 2017). Moreover, information obtained through open-ended questions posed during semi-structured interviews can reveal detailed information concerning the reality of current circumstances (Gall et al., 1996).

According to the available literature, there is variance among clinicians as to what qualifies a student for speech-language services (Ireland & Conrad, 2016; Katsiyannis, 1990; Storkel, 2019), as well as how EBP influences recommendations for evaluation, treatment, and dismissal (Spaulding et al., 2006). Therefore, this study employed a grounded theory approach to analyze the data obtained from one-on-one interviews. The goal of a grounded theory analysis was to construct theoretical answers to the research questions of the present study, using the responses of experienced school-based clinicians (Emanuel, 2021). In analyzing the data obtained from the interviews, I identified clinical approaches that school-based SLPs use to determine student eligibility for services, and the role of EBP in their decision-making processes concerning evaluations, recommendations, and dismissal. I also identified common and unique variables, apart from EBP, that may affect the decision-making processes among clinicians. Further, the grounded theory approach was advantageous to the present study, as the semi-structured interview format allowed participants to support their answers with explanations derived from personal and professional experiences (Nizza et al., 2021). A strength of this approach was that it resulted in the discovery of information I had not previously considered (Gill et al., 2008).

Participants

For this study, I recruited 12 public middle school-based SLPs to participate. According to Guest et al. (2006), 12 interviews are typically sufficient to achieve data saturation for most qualitative studies using purposive sampling. Data saturation is the point at which new themes will not be identified through the acquisition of more data (Guest et al., 2006).

Of the 12 participants, 11 were women and 1 was a man. At the time of the interviews for this study, all participants were working in New Jersey public middle schools. Further, each respondent had at least 3 years of experience in their current setting. Of the participants, eight worked in suburban school districts, three in urban school districts, and one in a rural school district. The number of students on participant caseloads ranged from 36-126. The average caseload size was 71.7. Table 1 shows participant demographics.

Table 1

Participant Demographics

Participant	Gender	Years of Experience	School District	Number of Students on Caseload
1	F	3	Suburban	55
2	F	16	Urban	100
3	F	17	Urban	55
4	M	20	Suburban	58
5	F	27	Urban	40
6	F	9	Suburban	88
7	F	11	Rural	80
8	F	18	Suburban	90
9	F	4	Suburban	36
10	F	14	Suburban	45
11	F	3	Suburban	87
12	F	10	Suburban	126

Sampling

I used purposeful sampling to recruit 12 school-based SLPs to participate. Purposeful sampling meant that the participants were selected based on specific characteristics (Cahill et al., 2022). The specific characteristics, or criteria, for participants to be included in this study are described in the following subsections.

Geography of Participants

I recruited middle school-based SLPs who worked in New Jersey public schools. This geographical criterion was selected for multiple reasons. First, New Jersey has stringent

parameters for determining if a student should receive a language impairment special education classification (N.J.A.C. Section 6A:14-3.5, 2006). In New Jersey, a language impairment, or CI classification, as it is referred to in the state, is determined based on the results of a functional assessment and two standardized evaluations. Concerning the formal measures, at least one assessment must be a comprehensive language evaluation, and both must result in scores at or below the 10th percentile (N.J.A.C. Section 6A:14-3.5, 2006).

Contrary to New Jersey, in most states, the language impairment aspect of the SLI classification lacks a quantifiable definition. For instance, states such as Ohio, Hawaii, Arizona, South Carolina, Tennessee, North Dakota, and Louisiana use the federal criteria for SLI as it is written (Ireland & Conrad, 2016). For these states, in accordance with IDEA, SLI is defined as a communication disorder that may include deficits in the areas of articulation, fluency, voice, or language (IDEA, 2004); however, unlike New Jersey, these states do not recommend score-based criteria from standardized measures to determine eligibility for speech-language services (Ireland & Conrad, 2016).

A diverse number of deficits in receptive, expressive, and pragmatic language can contribute to a CI classification. As CI can present differently across students, school-based SLPs must remain informed on EBP to ensure that they are optimally assessing and treating students based on their unique needs. According to the New Jersey Department of Education, more than 17.62% of New Jersey's public school students between 3 and 21 years of age had special education classifications (New Jersey Department of Education, 2022). This was slightly above the national average of 15% (Irwin et al., 2021). Further, of the children with special education classifications in New Jersey, 23.15% had a CI classification (New Jersey Department of Education, 2022). Thus, by recruiting New Jersey school-based SLPs to participate in this study,

I hoped that the participants would have experience using EBP in their decision-making processes.

Public School

I recruited middle school-based SLPs who work in public schools because the provision of their services is critical for students with SLIs to experience a FAPE (Kaufman & Blewett, 2012). Further, SLPs who work in public schools must consider the curricula and policies at the local, state, and federal levels. Public schools and their curricula are heavily influenced by policies at the local, state, and federal levels. This is in contrast to private schools, where principals have a great deal of influence over the curriculum of their schools (National Center for Education Statistics, 1995). Further, public school-based SLPs often provide services with the goal of remediating speech or language deficits that are hindering academic achievement (Ehren, 2002). Following IDEA, the necessity to help students attain this achievement in the LRE may influence their recommendations (Brandel & Frome Loeb, 2011). Conversely, speech-language goals in private schools frequently focus on functional communication, or the ability to express emotions and convey basic needs (Walker et al., 2018). For these reasons, private school-based SLPs were excluded from this study.

Middle School

I recruited the study's participants from public middle schools, as students in secondary school generally receive fewer speech-language services than those in pre-K or elementary school (Pfeiffer et al., 2019; Steppling et al., 2007). This declination is despite literature findings that indicate DLDs affect students throughout their school experiences (Orrego et al., 2023). Further, as the curriculum increases in complexity with each grade level, students with language disorders can continue to benefit from speech-language services following elementary school

(Brandel, 2020; Comkowycz et al., 1987). Therefore, by recruiting middle-school SLPs to participate in this study, this researcher gained data about the role that EBP plays in determining the dismissal or continuation of speech-language services in secondary school.

Certificate of Clinical Competence

For the present study, each participant was required to have a CCC from ASHA. The CCC is a nationally recognized certification for licensed SLPs. According to ASHA (n.d.-i), possession of the CCC indicates that a clinician has voluntarily met rigorous professional standards, completing tasks that exceed the minimum requirements for state licensure. Such tasks include participating in 30 hours of professional development every 3 years (Mahowald & Rentmeester-Disher, 2019). These hours are obtained through ASHA-approved continuing education courses that are designed to inform clinicians about the latest evidence-based research concerning the evaluation and treatment of disorders related to speech and language (Roberts et al., 2020). Further, since 2005, ASHA has required all of its certified clinicians to use EBP by integrating research evidence with clinical expertise and client values when making clinical decisions. Finally, a central tenet of the CCC is the responsibility of the holder to use EBP in all professional decision-making processes (ASHA, 2005).

Data Collection and Instruments

Semi-Structured Interview

I used semi-structured interviews to answer the research questions. Semi-structured interviews can be conducted in both group and individual formats. They utilize a combination of closed- and open-ended questions and allow for the interviewer to ask follow-up *how* and *why* questions (Adams, 2015). According to Kallio et al. (2016), qualitative researchers often use

semi-structured interviews due to their flexibility, versatility, and allowance for reciprocity between the interviewer and the interviewee.

A significant aspect of qualitative research is the establishment of good rapport with the participants. Therefore, while I used predetermined questions, the semi-structured nature of the interviews allowed for spontaneity and organic exchanges. By using a semi-structured interview format, I felt that the participants were open and honest with their responses.

Virtual Interviews via Google Meet

The data for this study were collected from 12 one-on-one virtual interviews using Google Meet. The virtual interview format was selected as it was advantageous for this study, which included participants from various townships in the State of New Jersey, which encompasses 8,722 square miles (State of New Jersey, 2024). Thus, the use of virtual interviews helped circumvent geographical barriers and allowed for more convenient scheduling between the interviewer and interviewees. Additionally, according to research, conducting interviews virtually, as opposed to in person, should not significantly affect their richness (Johnson et al., 2019).

Google Meet is a video conferencing and online meeting platform created by Google. Designed with a focus on enhancing online meetings, Google Meet provides various features that made it a viable option for the data collection for this study. Such features include real-time video, participant cameras that can be activated or deactivated, and microphone control. Online meetings conducted using Google Meet can also be recorded and transcribed by the platform (Astuti & Purwanto, 2021).

Recording and Transcribing Using Google Meet and Lenovo Ideapad 3

The online meeting platform that was used in this study, Google Meet, was capable of recording the audio and video from virtual meetings (Astuti & Purwanto, 2021). Therefore, I used the Google Meet platform to complete these tasks. As the interviews were being recorded, I took notes concurrently. The purpose of taking notes during the interview was for me to record my initial impressions regarding the responses of the participants, not to create a full transcription (Halcomb & Davidson, 2006).

Immediately after each interview, I saved and downloaded the audio and video recording of the meeting, as well as its transcription. After saving the data in a file on my personal password-protected Lenovo Ideapad 3, I printed and read the transcript of the interview while listening to its audio recording. This allowed me to proofread errors and add notes regarding characteristics of the participants' speech (e.g., loudness, cadence, tempo) or disposition (e.g., emotional state). The immediacy of this task following each interview was crucial, as it ensured that reflections from each interview remained fresh, and allowed for the documentation of extraneous variables, as well as how they could have influenced the interview (Halcomb & Davidson, 2006). The transcriptions of the one-on-one recorded interviews were formatted and saved in a Microsoft Word document.

The formatting of the interview transcripts in Microsoft Word involved making sure that all discourse was clearly labeled based on the appropriate speaker (i.e., the researcher or participant). I also ensured that the Microsoft Word document clearly included my initial impressions of participant answers, as well as extraneous variables (e.g., background noise, connectivity issues, technical difficulties with the audio or video) that may have affected the interview. Additionally, using the page layout tab in Microsoft Word, I added line numbers

throughout the entirety of the transcription. The Microsoft Word document was saved on my password-protected Lenovo personal computer.

Interview Protocol

The interview protocol (see Appendix A) consisted of 12 open-ended questions. These questions were created with the goal of attaining information from school-based SLPs concerning how they determine student eligibility for services, and the role of EBP in their decision-making processes regarding evaluation, recommendations, and dismissal from services. While the semi-structured interview format allowed for follow-up questions that led to mild deviations from explicit focus on the research questions, the interview protocol helped me redirect discourse as needed.

Procedures

Recruiting Participants

To recruit ASHA-certified New Jersey public middle school-based SLPs, I contacted the action center of ASHA at asha.org. After filling out a form requesting a list of the contact information for all ASHA-certified New Jersey public middle school-based SLPs, I received an email fromasha.org, which explained that the request would be forwarded to ASHA's membership team. The mailing list manager at ASHA then contacted me via email. The mailing list manager provided me with a link to ASHA's Marketing Solutions page, where a request for a list of ASHA-certified New Jersey public middle school-based SLPs could be made. On this request page, the user has the option to request lists of SLPs with characteristics pertaining to their geographic area, places of employment, professional title, age range of clients, areas of expertise, and special interest groups (ASHA, n.d.-j).

According to ASHA, the organization provides lists of speech, language, and hearing professionals to members of the public upon request for 22 cents per name. Such lists are also available to members of ASHA through the ASHA Community website at no charge. These lists include the names of the individuals matching the demographic criteria of the search, but do not include the emails or phone numbers of the professionals. As a member of ASHA, I was able to obtain a list of potential participants meeting the eligibility criteria for this study from the ASHA Community website. Although the list did not include email contacts, a Google search of the names with their professional title allowed for me to identify the school districts of potential participants. Using this information, I was able find the email addresses of 200 potential participants.

Initial Contact With Participants

A recruitment letter (see Appendix B) was sent to the school district emails of 200 professionals that were on the list provided on the ASHA Community website. In addition to explaining the purpose of the study, the letter explained to the SLPs why they were eligible to participate in the study. The participants were also informed that the study would require participation in a virtual interview that would be both recorded and transcribed. Finally, I explained to the clinicians that their participation in the study was completely voluntary. The recruitment letter resulted in 27 responses. Of these responses, 8 reported that they no longer work in a middle school, while 3 declined to participate in the study. Although 16 middle school-based clinicians agreed to participate in this study, 4 did not show up for their scheduled interview.

Initial Scheduling With Participants

The clinicians who agreed to participate in the study by responding to the recruitment letter (see Appendix B) were informed, via email, that the interviews would take place December 15, 2023–January 15, 2024. I also asked the participants to specify any days or times that would be optimal for them to participate in the interview. After the participant responded with potential days and times that they would be available, I offered the participant a time for the interview. A Google Meet for the participant was then scheduled.

Trial Interviews

Prior to the interviews with the participants, I used the interview protocol (see Appendix A) to conduct mock interviews with three school-based clinicians. These mock interviews, like the interviews for this study, took place virtually, using the Google Meet online platform. According to Kallio et al. (2021), mock interviews provide novice researchers with opportunities to practice and gain interview experience. Such experience can help researchers become more skilled in facilitating interviews that are naturalistic and rich with information. Mock interviews can also allow me to identify any interview questions that may be ineffective in answering the research questions (Kallio et al., 2016).

Reviewing the Transcription

Following the completion of the transcription, I used a form of respondent validation known as interviewee transcript review. Respondent validation is a way for researchers to check the credibility and accuracy of their results with the participants (Birt et al., 2016). Interviewee transcript review is a form of respondent validation that allows the researcher to share and review transcripts from interviews with the interview participants. Sharing transcripts with participants is a means to ensure their accuracy and allows participants to decide whether they

are comfortable with their involvement in the interview (Rowlands et al., 2021). Using this form of respondent validation allowed the participants to decide whether they wanted to modify or change their answers. Participants were informed that, if they wanted to change any of their responses, they would be invited to participate in a follow-up meeting with me virtually, via Google Meet.

Additional Meeting via Google Meet

All participants were offered the opportunity, but were not required, to participate in a second meeting with me. The additional meetings were to be conducted virtually via Google Meet. According to Johnson et al. (2019) videoconferencing is an effective way to conduct qualitative research, and can help the researcher, and the participants, circumvent time restraints and geographical barriers (Johnson et al., 2019).

Of the participants, only one requested that their transcript be modified, as they felt it contained information that could be used to identify their director of special services. The participant declined to participate in a second meeting, specifying that they felt it was not necessary. Using the line numbers of the Microsoft Word document containing the transcription of their interview, the respondent identified an excerpt that they wanted omitted from the transcript. I honored this request and emailed a revised transcript to the participant. The participant then approved the revised transcript.

Analysis

To conduct a proper analysis, I familiarized myself with the data through a process called immersion. This process involved printing out and re-reading all the interview transcripts. I also re-watched and re-listened to the recorded participant interviews. I repeated these processes until confident that he had gained thorough familiarity with and understanding of the data. This

process also provided additional opportunities for me to address any errors in the data or add information that was previously missed (Bennett et al., 2018). After I felt that familiarity with the data had been established, I began the process of coding the data.

Grounded Theory Methodology

The data for this study were analyzed using grounded theory, an approach to qualitative analysis that helps the researcher answer *how* and *why* questions (Bennett et al., 2018). The utilization of grounded theory helps researchers understand a topic through the analysis of data, without preconceived notions, allowing the researcher to draw conclusions and identify patterns in the data (Oates & Bean, 2023). The grounded theory methodology was used by Williams and Moser (2019) in a paper that detailed a three-step coding process in qualitative research. This process includes open coding, axial coding, and selective coding. To ensure that the transcripts were properly coded, I used Dedoose, a cross-platform application that supports the analysis of qualitative data.

Open Coding

The first level, open coding, involved identifying single words, phrases, and broad themes in the data. This required me to code the interview transcripts, line by line, to decipher the concepts relevant to the research questions. Using Dedoose, I color-coded, labeled, and described 14 concepts related to how public middle school-based SLPs determine eligibility for services, as well as how EBP influences their decision-making processes.

Following the identification of the concepts during open coding, I exported the color-coded interviews from Dedoose, and saved them on 12 different Microsoft Word documents. Using a strategy like the one employed by Bennett et al. (2018), I printed the color-coded transcripts as hard copies. I then created a mind map by cutting the highlighted excerpts from the

transcripts and pasting them on notecards. The notecards were organized by their color and taped to a 72” x 40” classroom whiteboard, located in my office (Bennett et al., 2018).

Axial Coding

The axial coding phase required me to determine the nature of the relationships between the concepts identified during the open coding phase of analysis (Chun Tie et al., 2019). Thus, these concepts and encompassing excerpts, visually displayed as a mind map on a 72” x 40” classroom whiteboard, were analyzed for thematic connections. Thematic connections were established between open codes based on the nature of their relevance to the topics addressed during participant interviews. As a result of the axial coding phase of analysis, the concepts identified during open coding were merged as subcategories into four major categories: (a) *determining eligibility for speech-language services*, (b) *evaluating the speech-language skills of students*, (c) *making recommendations for speech-language service mandates*, and (d) *discontinuing direct speech-language services*. These categories were written on notecards and taped to the top portion of the mind map. The open codes on the mind map were reorganized under their appropriate category.

Selective Coding

The final level, selective coding, involved integrating the thematic categories from the previous level into cohesive, meaningful expressions. This required me to connect the categories from axial coding into one core category. For example, in the study by Williams and Moser (2019), at the axial level of analysis, the researchers identified the thematic categories of *collaboration* and *communication*. At the selective coding level, the data were further refined into the thematic category of *teamwork* (Williams & Moser, 2019).

To identify the theme connecting the codes that emerged during the axial phase of data analysis, I analyzed the mind map visually depicted on the 72" x 40" classroom whiteboard. As a result of thorough analysis, I was able to identify a theme that was both explicitly referenced and frequently alluded to in the participant interviews: *adaptation*. The theme of *adaptation* derived from the data is multifaceted and connected the four major categories: (a) *determining eligibility for speech-language services*, (b) *evaluating the speech-language skills of students*, (c) *making recommendations for speech-language service mandates*, and (d) *discontinuing direct speech-language* services.

Ethical Considerations

Ethical principles in qualitative research are essential to ensure that the study's attempts to answer the research questions do not violate the rights of the research participants (Orb et al., 2001). For the present study, the anonymity of the participants and their students was of critical importance. Although the data collected for this study did not identify the participants, their students, their school, or their city, it identified the type of community that their school is in and the size of their caseloads.

Prior to the study, participants were informed of the study's purpose and implications. They were also reminded that they were voluntary participants and that they had the right to withdraw from the study at any time without any penalty or repercussions (Orb et al., 2001). The participants were assured that all data collection for the study was conducted confidentially (Sutton & Austin, 2015). Further, the participants were informed that aside from this researcher, no other individual would listen to the recording of their interview.

Trustworthiness

To ensure the trustworthiness of the present study, I used Interviewee Transcript Review, a tool that is used as a form of respondent validation. Respondent validation is a way for researchers to check the credibility and accuracy of their results with the participants (Birt et al., 2016). Participants were informed that if they wanted to add any information to their interview responses, modify an answer, or discuss one of the questions in more detail, they were entitled to a follow-up meeting with me, which would be conducted via Google Meet. For purposes of triangulation, the conclusion of the study cites information from earlier studies that support or refute the findings of the present study.

Potential Researcher Bias

I am currently a school-based SLP in New Jersey. Further, I have a number of beliefs about the role EBP should play in the decision-making processes of school-based clinicians. Therefore, I structured the interview protocol with objective questions, and was mindful that the follow-up inquiries were not leading in nature. Thus, the recordings and transcripts from the mock interviews were used to identify any tendencies to elicit anticipated responses (Chenail, 2016). Further, I believe that school-based SLPs have arguably the most important job in their school, as students with untreated communication deficits will have a difficult time participating in any classroom lesson, regardless of its impact on academic achievement. While this researcher has been lucky to work with colleagues who share these views, he was aware that conducting interviews with unfamiliar practitioners could produce perspectives contrary to his; however, when this did occur, objectivity and a good rapport with the participants were able to be maintained.

Limitations

The present study offers insight into how New Jersey public school-based SLPs determine student eligibility for services, as well as how EBP is used for evaluations, recommendations, and dismissal from services; however, it was not without limitations. The most notable limitation of the study was its small sample size. Although 10–15 interviews are sufficient to come close to data saturation (Guest et al., 2006), it is likely that this study, in part due to its small sample size, did not identify all variables that could appropriately answer the research questions. Second, the present study focused explicitly on public schools in New Jersey. It is possible that clinicians in other states, where laws concerning eligibility for speech-language services vary, would respond differently to the questions of the interview protocol. Future studies might consider recruiting more participants from school districts outside of New Jersey. Finally, this study did not include school-based SLPs who were not certified by ASHA. According to the New Jersey Speech-Language-Hearing Association (NJSHA, n.d.), SLPs in the State of New Jersey must complete 20 hours of professional development every 2 years; however, this study did not explore how such requirements would compare to ASHA's in terms of influencing clinicians to use EBP in decision-making processes.

CHAPTER 4

RESULTS

This chapter contains the results of the present study, conducted using a grounded theory methodology. The results were used to answer the following research questions:

1. How is eligibility for school-based speech-language services determined?
2. How do evidence-based practices influence clinical decision-making processes concerning school-based speech-language assessments and subsequent recommendations?
3. How do evidence-based practices influence decisions to dismiss students from direct speech-language services?

Participants

The 12 participants in this study were all New Jersey public middle school-based SLPs, who had been working in their school for at least 3 years. Although their caseloads ranged from 36–126, many SLPs explained that most of the students on their caseloads are challenged with moderate to severe communication deficits. Further, many participants indicated that they assessed and treated students with different special education classifications. The most common special education classifications cited by participants were CI, followed by ASD, MD, SLD, and OHI. Four participants explained that most of their students are educated in self-contained classrooms. Three of the self-contained classrooms mentioned by participants were for students with ASD classifications, and one was for students with a learning and language disability (LLD).

Although the job satisfaction of middle school-based SLPs was not a topic explored by the present study, all but one participant seemed to genuinely enjoy their occupation. Most

participants expressed sincere motivation to help students and families overcome the various challenges that often accompany communication disorders. This motivation may have been due, in part, to the empathy expressed by the clinicians for the parents of the students they work with, as all but two participants said that they had children of their own. Two participants also explained that they had close relatives who suffered from communication disorders. As a result, these participants were inspired to pursue a profession that allowed them to help individuals with special needs.

Grounded Theory Analysis

The results from the open and axial coding phases of the grounded theory analysis were used to answer the research questions of the present study. During the open coding phase of analysis recurrent concepts and themes were identified and merged into 14 different categories. Table 2 shows categorical concepts identified during the open coding phase of analysis.

Table 2

List of Concepts Identified During the Open-Coding Phase of Analysis

Standardize Scores	Academic Impact	Parent Preferences
Student Characteristics	Administrative Guidelines	Perceived Ability of the Student
Comfort Level of the Clinician in Using an Assessment	Availability of Evaluations	Determining Group Sizes
Determining Frequency of Services	Determining the Location of Services	Motivation level of the student
Parent Input	Informal Measures	

The concepts that emerged from the open coding phase of analysis were analyzed for thematic connections and organized as subcategories under four major themes that were identified in the data: (a) *Determining Eligibility for Speech-Language Services*, (b) *Selecting Measures to Evaluate the Speech-Language Skills of Students*, (c) *Making Recommendations for Speech-Language Services*, and (d) *Discontinuing Direct Speech-Language Services*.

Table 3

List of Categories and Subheadings

Determining Eligibility for Speech-Language Services	Selecting Measures to Evaluate the Speech-Language Skills of Students	Making Recommendations for Speech-Language Services	Discontinuing Direct Speech-Language Services
Standardized Scores	Perceived Ability of the Student	Determining Group Sizes	Motivation level of the student
Academic Impact	Comfort Level of the Clinician in using an Assessment	Determining the Frequency of Services	Parent Input
Parent Preferences	Availability of Speech-Language Evaluations	Identifying the Appropriate Location for Services	Informal measures
Student Characteristics			
Guidelines from Administrators			

Research Question 1

Determining Eligibility for Speech-Language Services

The statements coded for this category included those from clinicians regarding what makes a student eligible to receive speech-language services in a public middle school. Through analysis of the data obtained for this study, the concepts identified with the highest frequency were coded and merged into subcategories, leading to the derivation of this major category. The subcategories for *Determining Eligibility for Speech-Language Services* are (a) Standardized

Scores, (b) Academic Impact (c) Parent Preferences, (d) Student Characteristics, and (e) Guidelines from Administrators.

Standardized Scores

The study's participants provided various statements related to the standardized scores they use to determine eligibility for speech-language services. Excerpts from interviews were coded as "standardized scores" if they discussed the utilization of standardized results to help them decide the eligibility of a student for speech-language services. The following statement indicates the role that standardized scores play in determining eligibility for speech-language services for public middle school students:

> I go based on the NJ code to help me determine who is eligible for services. So based on the under 1.5 standard deviations rule in the code, I look for the less than the 10th percentile rank on two standardized language assessments. (Participant 9)

In this quote, the clinician is referencing New Jersey Administrative Code (N.J.A.C.) 6A:14-3.5(c)4 that states students must earn scores of less than 1.5 standard deviations from the norm, or below the 10th percentile, on two standardized language assessments. The code further explains that one of the evaluations must be a comprehensive assessment, a formal measure to which Participant 9 also referred.

Participating clinicians also referenced the use of standardized scores for determining a CI classification. Referring to their role in the decision to provide or deny services, one clinician specified that CI classifications are based on standardized metrics:

> For CI, you have to get below the 10th percentile on two standardized tests or two composites on standardized tests. I mean, let's just say, for example, I've done the CELF. If they get below the 10th percentile on even one composite that counts as one. The

> expressive language composite, receptive language, or a ROWPVT, or the OWLS, just any two standardized tests below the 10th percentile would make them eligible for CI. (Participant 5)

Similar to Participant 9, Participant 5 referenced the N.J.A.C. 6A:14-3.5(c)4 and its relationship with standardized scores; however, N.J.A.C. 6A:14-3.5(c)4 requires one formal evaluation to be a *comprehensive* evaluation. Thus, a student who scored below the 10th percentile on two standardized evaluations, according to N.J.A.C. 6A:14-3.5(c)4, would not qualify as CI, if one of the assessments was not comprehensive in nature.

Academic Impact

All but one respondent indicated that they use standardized measures when making determinations concerning the eligibility of a student to receive speech-language services; however, while standardized scores indicating linguistic abilities in the low range typically make a student eligible to receive speech-language services, low scores are not requisite. A participant detailed a scenario in which a student may have standardized scores indicative of average linguistic skills but demonstrated areas of weakness affecting them in the classroom:

> If there's a significant enough academic impact, and if the teachers are saying like, what I found using the CASL, that the student is having trouble making inferences or using context clues, then I would have to consider how those things are affecting them in class. If those are areas of weakness in class and their comprehension really tanks when they have to make inferences or have trouble keeping up with the class because of nonliteral language, and things like that, then they would be eligible for services, especially at the middle school level. (Participant 3)

Determining a student eligible for speech-language services based on *academic impact*, despite comprehensive standardized scores in the average range of functioning, was a possibility acknowledged by five of the participants in this study. The participant explained that they determine both eligibility for speech-language services and the classification of CI, primarily on academic impact. The clinician also stated that such determinations are subjective:

> For sure they can be eligible for services. If a student has average scores on all formal assessments and does pretty well on informal assessments, but for some reason there's something disconnecting in the classroom. If his speech-language skills are affecting him negatively in the classroom, they can qualify as CI. Everything is so subjective. (Participant 2)

Contrary to most of the respondents, Participant 2 did not mention N.J.A.C. 6A:14-3.5(c)4 when discussing how they determine a CI classification. It was also unclear how it could be determined that the speech-language abilities of a student were adversely affecting their academic progress if they scored within the average range on all formal and informal assessments of the evaluative battery. The notion of subjectivity further indicates that the parameters for who should receive speech-language services, for some clinicians, may be unclear.

Academic impact can also be used to determine a student ineligible for services. A clinician who primarily works with students of a middle school LLD self-contained program explains the value of standardized scores. Although they recognize their importance in identifying areas of both strength and weakness, the clinician explained how low standardized measures do not necessarily determine eligibility for services:

> For my students in the LLD program, I know they will bomb a formal measure. At the end of the day, I know they will need extra support, but what are their strengths and weaknesses? That's what I take from formal measures. Also, with the proper supports, and verbal prompts or cues, if the student can succeed in their classroom, they don't necessarily need me. (Participant 6)

The perspective of Participant 6, in referencing that appropriate support within the classroom could, in some instances, negate the need for direct speech-language services, was shared by many of the participants. Most clinicians indicated that, for students with severe linguistic challenges, specifically those within self-contained classrooms, many of the strategies utilized in speech-language therapy are routinely used in their classroom. As a result, clinicians seemed to struggle with eligibility decisions when providing services required the student to be removed from a classroom that is addressing the same deficits as speech-language therapy.

Parent Preferences

Clinicians participating in this study consistently mentioned parental preferences as a contributing factor in determining whether a student should be eligible for services. While parental input suggesting their child's need for speech-language services does not typically negate standardized test scores that fall within the average range, their perspective could sway a determination that is undecided.

The following excerpt from a participant provides insight concerning how parental input can impact a student's eligibility to receive speech-language services:

> In those cases where the student is borderline, we get the parents involved. We both share our perspectives. Sometimes parents have valid concerns, and it does affect my recommendation. Also, if the parent is motivated to get speech services, typically their

> child will be motivated as well. So, ultimately, if the parent really wants speech, and the child is borderline, I would recommend services. (Participant 4)

Although the statement from Participant 4 described a collaborative dynamic between the clinician and parents, other participants noted that some dynamics are more combative than cooperative. The following statement demonstrates challenges that are possible when working with parents:

> I hate to say it, but sometimes, eligibility depends on the parent. Because the parent, they might say, I know they have weaknesses and they need service for that. But then you say, but overall, they really did OK. In my district, the parents know the code very well, and they know the state law. They can just be like, "I'm entitled to this." Or, "I want this," and you're like, "OK." Sometimes the student will make progress, but again, they don't necessarily need it as much as other kids might. Sometimes, I just give the services. It's not even worth arguing. Unfortunately, I think parents are a heavy influence, especially at the middle school level. I think it's because the parents now know the process. They're used to it. They've been to enough IEP meetings. They know what they want and how to get it. (Participant 6)

Although most participants reported good relationships with the parents of their students, almost half of the respondents indicated that they have had conflicts with parents over eligibility for services. Of the five participants who spoke of conflicts with parents, only one stated that they would not change their eligibility determination based on pressure from parents.

Student Characteristics

The participants in this study also frequently discussed the notion that the perceived motivation of the students to work on their language deficits played a role in determining their

eligibility for services. Discourse from participant interviews was coded as "student characteristics" if it discussed how the characteristics of a student can influence their eligibility for speech-language services.

At the middle school level, multiple clinicians mentioned that the willingness of the student to address their speech-language deficits could affect whether the clinician recommends services. The following statement illustrates how the perceived motivation of a student who would qualify for speech-language services on standardized measures can be used to determine if they are in fact needed:

> Sometimes I'll go off of, does the kid want speech? I feel like at the middle school level, the students have much better awareness. So, if their deficits are not bothering them as much, I try to talk to the parents and say, "Progress isn't really going to go anywhere. It's hard to make progress if the student is not motivated." (Participant 6)

Student motivation was also cited as a variable that would sway a clinician's decision to provide services, despite not qualifying based on standardized measures. The clinician explained that the linguistic needs of the student, in conjunction with their perceived level of motivation, can lead to a student being found eligible for speech-language services:

> I've had some students, specifically those with pragmatic language deficits, who have done really well on standardized evaluations. But then you see them in the classroom, or the hallways, or the cafeteria, and it's not generalizing. They can end up being eligible under, I don't know, SLD or something like that. If there is a need, and the student is motivated, if the buy-in is there, then I would provide services. (Participant 12)

Participant 12 further explained that after evaluating students in the areas of articulation, fluency, and voice, if they identify a disability, they will make a student eligible for speech-

language services, even in cases where there is no academic impact. This is consistent with ASHA's view on how eligibility for school services should be determined, as the organization feels that academic impact should not only pertain to grades (Dublinske, 2002); however, it conflicts with N.J.A.C.6A:14-3.6, which equates academic impact strictly with educational performance (N.J.A.C. Section 6A:14-3.6, 2006).

Guidelines From Administrators

In many public school districts, administrators can be critical contributors to the processes of eligibility for speech-language services. The degree to which they enforce criteria for eligibility could play a crucial role in determining what students receive speech-language services. As demonstrated in the following excerpt, administrators often favor their clinicians upholding the New Jersey Administrative Code N.J.A.C.6A:14-3.5(c)4 when making determinations concerning eligibility for services:

> We go by the New Jersey Administrative Code. My supervisor made me save the link to the code on our computer so we can always refer back to it. We use the code specifically when determining when a student should be considered speech or language impaired, or CI. But we're also supposed to use the same criteria for determining the need for services. (Participant 1)

Participant 1 explained that aside from their emphasis on the need to reference N.J.A.C.6A:14-3.5(c)4 when making eligibility decisions, administrators do not provide any guidelines concerning who should be eligible for speech-language services. Participant 1 stated that they felt N.J.A.C.6A:14-3.5(c)4 could be interpreted in multiple ways, which can make decisions on eligibility difficult.

For some participants, the administrative guidelines on eligibility were clearer and eliminated uncertainty. Participant 4 explained how guidance from their supervisor allows them to confidently make decisions as to who should be eligible for speech-language services:

> Our supervisor always says that there's a three-prong component to eligibility. Is there a disability? Does it negatively impact the student in the classroom? And are they 1.5 standard deviations below the mean? If the answer to one of those questions is "no," then the student should not receive services. So, that's how we determine eligibility. (Participant 4)

Participant 4 explained that they believed eligibility for speech-language services was most likely determined in the same manner in other school districts; however, while other participants made references to the questions encompassed in the three prongs of eligibility throughout their interviews, only one other therapist explicitly mentioned them as a way to determine who should receive speech-language services.

Other participants expressed that their administrators are somewhat hands-off in helping middle-school SLPs determine student eligibility for speech-language services:

> We don't really have any guidelines. I feel like none that are set in stone right now. But I feel like we're told to follow the code. I feel like, at least in my experience, administrators have been pretty hands-off in my eligibility decisions. (Participant 7)

A similar perspective was echoed by another clinician. In addition to stating that the supervisor was minimally involved in determining eligibility for services, they further explained that the classification of SLI, or CI is also left to the discretion of the clinician:

> I think our supervisor kind of leaves it in our hands. He's like, "You guys are professionals, I'll leave you to decide who is CI," and he also knows that everyone is a

little bit different in how they approach it. Not to say we don't have certain things set in stone, but a lot of it is up for interpretation. (Participant 6)

According to all but two of the participants, administrators generally encouraged clinicians to reference N.J.A.C.6A:14-3.5(c)4 when making eligibility determinations, or in some cases, provided no guidelines at all. All 12 participants indicated that their direct supervisor did not have a background in speech-language pathology. Many of the participants, including Participant 6, hypothesized that a lack of knowledge concerning the roles and responsibilities of the school-based SLP likely contributes to the limited degree to which administrators are involved in eligibility determinations and the decision-making processes of the clinicians under their supervision.

Research Question 2

Selecting Measures to Evaluate the Speech-Language Skills of Students

The statements coded for this category included statements from clinicians regarding factors that influence their decision-making processes regarding what assessments they select to conduct a speech-language evaluation of a student. Through analysis of the data obtained for this study, the concepts identified with the highest frequency were coded and merged into subcategories which led to the derivation of this major category. The subcategories for *Selecting Measures to Evaluate the Speech-Language Skills of Students* are (a) Perceived Ability of the Student, (b) Comfort Level of the Clinician in using the Assessment, and (c) Availability of Speech-Language Evaluations.

Perceived Ability of the Student

The participants in this study frequently discussed the notion that their perception of the student's linguistic and cognitive abilities influenced what assessments they selected to complete

the evaluative process. Participants explained that this is most relevant when they are reevaluating a student that they have provided speech-language services for in the past. Clinicians also use information gathered from teachers, parents, and IEPs to help them determine the appropriate evaluation to use for assessing the speech-language abilities of a student.

In discussing how the perceived ability of the student influences their decisions concerning which assessment to use for a speech-language evaluation, the clinicians often explained that formal measures frequently differ significantly in how they can be completed. For instance, some standardized assessments are heavily reliant on the ability of the participant to produce spoken language, while others allow students who are nonverbal to demonstrate their linguistic skills by pointing at pictures or using an augmentative alternative communication (AAC) device. The following excerpt demonstrates how factors such as the student's linguistic ability could influence what evaluations the clinician selects as a formal measures:

> The assessment that I select is really based on the student. Like, I work with a lot of students who use AAC, so sometimes, as far as a standardized test, I know that they might be able to perform better on the OWLS because it's a little bit less language intense. (Participant 9)

Participant 9 provided an example as to why they favor the utilization of the Oral and Written Language Scales, 2nd Edition (OWLS-II), as it can assess students at all linguistic levels. Participant 9 went onto explain that, when evaluating students for higher-level language skills, they prefer the Comprehensive Assessment of Spoken Language, 2nd Edition (CASL-2) or the CELF-5.

Clinicians also indicated that student characteristics, such as their ability to maintain focus throughout the evaluation, played a role in determining which assessment they would use

for a speech-language assessment. The respondents acknowledged that students who struggle with attention may have difficulty sitting through lengthy comprehensive evaluations. Clinicians explained that they try to select an assessment that will allow the participant to optimally demonstrate their speech-language skills. One clinician addressed the importance of considering a student's ability to maintain focus during the administration of an assessment, and how certain evaluations may adversely affect their ability to complete an evaluation properly:

> If I see ADHD as a diagnosis, I kind of stay away from the CELF because I feel like that test requires a lot of working memory. It requires a lot of attention, and we can't repeat for a handful of those subtests. Whereas on the CASL, you can provide at least one repetition, usually, on the subtest. I know that some of my students, they will probably need that repetition. (Participant 7)

As shown by the participants' responses cited in this section, that public school-based clinicians select from a limited number of formal assessments when conducting speech-language evaluations. From the limited number of formal evaluations used by public middle school-based clinicians, the data reveal that clinicians try to select assessments based on the perceived abilities of the student. Such abilities pertain primarily to cognition and attention.

The Clinician's Level of Comfort in Using an Assessment

Most of the respondents indicated that they routinely use one or two formal evaluations to assess the speech-language abilities of the student. Clinicians explained that they favor specific formal measures over others due to their comfort level in administering the assessment. Participants reported that familiarity with a given assessment allows them to effectively obtain measures that accurately reflect the language ability of the student.

The participants in this study repeatedly stated that selecting formal measures based on the clinician's level of comfortability with their administration was, in most cases, appropriate. One participant explained reasons for variability in the assessments used by school-based clinicians for speech-language evaluations, as well as why they favor using the CASL-2, as a standardized measure:

> I also feel like, with the different tests, everyone kind of likes different tests. I really like the CASL, even though it takes forever to administer. I'm comfortable with it, and I'm confident in the information that it gives me. (Participant 7)

Participant 7 went on to explain that many people in their district use the CELF-5 for most of their language assessments. Although they have also used the CELF-5, Participant 7 indicated that they feel the information yielded by the CASL-2 allows the clinician to create more specific goals. Further, the participant stated that when conducting a comprehensive evaluation on a middle school student, they almost always use the CASL-2.

Another participant echoed comfort as a critical variable in their reliance on the CELF-5 to formally evaluate the language abilities of students. Participant 4 discussed how long-term use of this assessment allows for the acquisition of standardized scores that are reflective of the student's ability to comprehend and utilize language:

> I have the CELF, and I'm really comfortable at this point, after 17 years! I like administering the CELF because I feel it is very comprehensive, and it hits on everything we need to assess. From doing it for so long, you kind of learn the best way to administer it. Like, I used to try to do all subtests at once. Now, I take my time. I've learned when to give students breaks, and which subtests are better to administer on different days, by themselves. When it's done properly, I feel like it gives great information on a student's

language skills. So, I usually basically start with the CELF because I feel it is comprehensive and it's effective.

While clinicians often cited comfortability as a reason for selecting a limited number of assessments to use for formal measures, participants did recognize the danger of using this rationale without considering the characteristics of the student. Participant 6 discussed how overreliance on a limited number of measures could adversely affect the treatment outcomes of the student:

> I know in my district everyone loves the CELF. I know it's an unpopular opinion, but I hate the CELF. I mean, some older SLPs are stuck in their ways and will just use the CELF for everyone. I mean, if you have a student who is receiving ABA services, the CELF is not appropriate.

Participant 6 described the overuse of a formal assessment, the CELF-5, specifically on students receiving applied behavior analysis (ABA) services. Students in ABA classrooms often have severe receptive, expressive, and pragmatic language deficits. The participant went on to explain that the CELF-5 should primarily be used to evaluate higher language functions and would likely be inappropriate for students in ABA classrooms. As a result of using an inappropriate formal measure, clinicians can deem a student eligible for speech-language services but may have minimal information to create appropriate goals.

Comfortability in using a particular assessment was a common theme echoed by most of the participants in this study. According to the participants, using a familiar formal measure allows clinicians to confidently make decisions on eligibility and formulate appropriate goals for intervention. The overreliance on a particular standardized evaluation becomes problematic,

however, when its utilization is inappropriate for the student, specifically a student with severe linguistic challenges.

Speech-Language Evaluations Available for Selection

Participants consistently identified a small number of formal evaluations that they use to assess the speech-language abilities of students. These evaluations included CELF-5; the CASL-2; the Test of Language Development, Intermediate:5th Edition (TOLD-I:5); and the OWLS-II. The limited number of assessments used by clinicians was, in some cases, based on access to a limited number of formal measures.

A clinician showed frustration concerning the lack of selection of standardized evaluations available for utilization in their district. They explained that when doing a comprehensive speech-language evaluation, there were two formal evaluations to choose from: the CELF-5 or the TOLD-I:5. In this statement, the clinician explained that they decide which of the two evaluations to use based on the age of the student:

> Choosing an evaluation can be frustrating because honestly, we don't have a lot of tests. So it's either the CELF or the TOLD, and it's just a matter of preference I guess. Honestly, maybe if it's an older student, I wouldn't give them the TOLD because it has multiple meanings and all that. Forget it. I don't deal with that. I just give the core language subtests and consider how their language affects them in the classroom. (Participant 2)

The participant explained that, based on their limited assessment selection, they often use the CELF-5, as they perceive it to be an easier formal evaluation than the TOLD-I:5. The clinician explained that the complexity of the test items administered on the TOLD-I:5 would cause their students to achieve a score that does not reflect their true language abilities.

Another clinician revealed that the limited selection of formal measures to choose from for evaluative purposes was a challenging aspect of their job. This clinician also explained that they work in multiple middle schools throughout their district. The participant described how the assessment that they use for the formal evaluation of a student may be determined by the building that they are in on a given day:

> Honestly, sometimes it's what's in the building. What test is available? Also, I try to think of the student before giving the assessment. But a lot of times I end up using the CELF or the CASL. I feel like one of the two is available in every school. (Participant 12)

Participant 12 referenced the availability of the CELF-5 and CASL-2 in most buildings that they work in. The participant explained that it's not necessarily a bad thing, as they are comfortable with both evaluations. Further, the clinician recalled instances where they felt a different formal measure would have been more appropriate for a student, but due to time constraints that come with the professional responsibilities of managing a large caseload, the CASL-2 or CELF-5 had to be utilized.

The participants in this study consistently indicated that the limited selection of comprehensive formal speech-language evaluations available to school-based clinicians is appropriate for most middle school students. While middle school-based SLPs try to consider the characteristics of the student when selecting an assessment, for many participants, the limited selection of available comprehensive speech-language evaluations results in the repeated use of specific formal measures, regardless of the linguistic abilities of the student. While this does not necessarily affect student eligibility for speech-language services, the results of such measures, in some cases, may not accurately reflect the student's skills in the comprehension and utilization of language.

Making Recommendations for Speech-Language Services

The excerpts from this category identified factors relevant to recommendations concerning the mandates of service provision. Through analysis of the data obtained for this study, the topics that occurred with the highest frequency were coded and then merged into subcategories which led to the derivation of this major category. The subcategories for recommendations were (a) Group Sizes, (b) Frequency, and (c) Location. All subcategories and their related themes will be defined and supported with excerpts from the participant interviews.

Determining Group Sizes

Through an analysis of the data, *determining group sizes* was identified as a critical subcategory within the major category of *Making Recommendations for Speech-Language Services*. Excerpts from interviews were coded as *determining group sizes* if they discussed the size of their typical groups or factors that influenced the sizes.

One participant described their preferred group size, as well as factors that might influence a different recommendation:

> I try to keep my groups as small as possible. At the middle school level, the only students that I have that I see individually are my students with pretty severe special needs. Or if a student is not able to be in a group for behavior issues. So, other than that, I try to do groups of less than 4 students. (Participant 5)

Participant 5 explained that some of their students, due to the nature of their challenges, can at times be aggressive toward their peers, or demonstrate self-injurious behaviors. For students afflicted with these behaviors, individual speech-language sessions are necessary. For students with mild to moderate linguistic deficits, the clinician indicated that having groups of two to

three students allows them to keep the students engaged, while still being able to take accurate data concerning progress towards their speech-language goals.

Other clinicians expressed that their group size is dictated by their caseload. The following excerpt demonstrates how a clinician must maximize the size of their groups to ensure that they can meet the service mandates for all students on their caseload:

> In my district, the magic number is five. We have so many kids on our caseload that they want to see five kids in every group. It would be a lot better if the mandate was for groups of three. But, honestly, if I had groups of three, I don't think I would be able to see all of the kids on my caseload. (Participant 12)

Participant 12 described one of the challenges of having a caseload of 126 students. Participant 12 also explained that large groups make it difficult to ensure that the linguistic needs of each student are being met. The clinician also discussed how large groups make the acquisition of data very challenging.

Determining the Frequency of Services

Making determinations concerning the frequency of speech-language services was another theme that participants addressed when discussing recommendations. Data from participants were coded for this subcategory if there was a mention of how often services were provided to the student, or how long each service was in duration. Factors related to the frequency of services included the needs of the student, scheduling, and the grade level of the student.

The following statement reflects how the participant determines the frequency of services for students with CI who are receiving in-class resource services:

> For sixth graders, I typically do twice a week, in a group, for 30-minute sessions. That would be for the more higher-functioning students. And then once the student gets to seventh or eighth grade, I try to reduce them to one time a week. It's just that, at that point, I don't think they should be getting pulled out of class so much, as they're about to transition into high school. Also, as students get close to high school, a lot of them stop wanting to come to speech. (Participant 11)

The notion of providing a similar frequency of services to middle school students was echoed by other clinicians, some of whom noted that challenges in scheduling force them to alter their mandates. One clinician explained how scheduling forced them to modify their mandates regarding frequency of services:

> The way we usually schedule in middle school is that we have block schedules. We are not allowed to pull from certain classes. I feel like monthly services give me more flexibility and allow me to meet the mandate. So typically, I see most of my sixth graders, I'll see them six times a month for 30-minute sessions. For seventh grade, I usually reduced them to three times monthly, and for eighth, I usually keep the same mandate or discontinue direct services. (Participant 4)

Other clinicians also stressed that, in some instances, the school setting is not conducive to their ideal recommendations. Here, a participant discussed the dilemma of determining the frequency of services for a student with mild to moderate speech-language deficits:

> We don't have the option to do a 6–8-week targeted intervention at the middle school level, which is all the student might need. We're hoping that we could eventually do that so that way we could give some targeted interventions to our resource room teachers or some of our specialists, but we're not there. So, a lot of times, when we are making

> recommendations for language students, we are trying to decide if we want to give monthly services throughout the year, or none at all. (Participant 3)

Data collected from participants suggest that frequencies of services are based, in part, on the needs of the student; however, at the middle school level, the frequency of speech-language services seems to be heavily influenced by the grade level of the student. Participant 3 indicated the desire to implement more intensive, short-term frequencies of service, but that in their current middle school settings, such interventions are not possible.

Identifying the Appropriate Location for Services

In discussing recommendations, the clinicians often addressed how they discern the location of where speech-language services will be provided. Data from the participants were coded to identify the appropriate location for services if it referred to the physical space where middle school SLPs were mandated to provide services.

Participant 7 addressed the preferred location for the provision of speech-language services for in-class resource students at the middle school level; however, the clinician states that recommendations could change based on the tendencies of the student:

> For location, a lot of my students are IC [in-class resource] and most of them are pull-out services. I feel like that's the best way to address the needs of the student. But if their attendance gets bad, or it's apparent they can't miss any class time, then I might push into the classroom. That's why in the student IEPs, I like to put "service provider location." That way I can change between pull-out and push-in as needed.

Participant 7 explained how they select "service provider location," for the location of services, rather than "pull-out of the classroom." By using service provider location for the designated location of services in the mandate of the student, the session, in essence, can take place in any

location that the clinician deems appropriate. Although Participant 7 likes the flexibility of this option, they emphasized that they prefer pulling students out of the classroom, as it limits distractions.

Additional participants also used push-in services due to their perceived effectiveness in addressing speech-language goals while directly promoting success within the classroom. The following excerpt reveals why one clinician prefers to provide services by pushing into the classroom:

> In the past I've mostly used pull-out services for middle school students. But this year, I think I'm definitely leaning more towards push-in services, where I will go into the classroom during a class like language arts and see the students. I want speech to be more functional for the students. By being in the classroom, I can come up with strategies that can help them academically. If the classroom environment is too distracting, or the student is not making any progress, I might change to pull-out. (Participant 9)

Many clinicians mentioned their desire to align the services with classroom content to help the student succeed academically. The notion of providing speech-language services in the classroom of the student was mentioned by the majority of the participants, with most having a favorable opinion of it. Other participants stated that the success of push-in services is largely contingent on the classroom teacher, as some have difficulty working with other professionals in their classroom.

The participants largely explained that the location of service provision is based on the students, and how well the setting allows the clinician to address their linguistic needs. Most clinicians interviewed still feel the best location for the provision of services is outside of the classroom setting, but all participants conducted at least some of their sessions in the classroom

of the student. While clinicians feel that the provision of services in the classrooms allows for intervention that directly supports academic progress, its implementation can be hindered by distractibility on the part of the student, or by teachers who have difficulty with collaboration.

Research Question 3

Discontinuation of Direct Speech-Language Services

The excerpts from this category identified factors relevant to determining circumstances that influence the discontinuation of a student's direct speech-language services. Through analysis of the data obtained for this study, the topics that occurred with the highest frequency were coded and then merged into subcategories, which led to the derivation of this major category. The subcategories for *Discontinuation of Direct Speech-Language Services* were (a) Motivation Level of the Student, (b) Informal Measures, and (c) Parent Input. All subcategories and their related themes will be defined and supported with excerpts from the participant interviews.

Motivation Level of the Student

All respondents were adamant that a student's level of motivation to work on their language skills is a major factor in determining whether to discontinue their direct speech-language services. Data from participants were coded for this subcategory if there was a mention of student motivation to attend speech-language therapy or participate in the activities of their sessions. This includes student behaviors during their sessions and their impact on the linguistic progress of the peers in their groups.

Many participants discussed noncompliance and problematic behaviors as reasons to discontinue services. One participant indicated that problematic behaviors frequently signal a lack of motivation on the part of the student to improve their language skills. The clinician

discussed discontinuing services when a student is unmotivated to appropriately participate in the session:

> I would say that if a child is not interested in making progress, and if they are disruptive to other children. I mean so much so that the students are no longer able to learn, because this child is in the room, then that's when I say, you gotta go. I'm not gonna discontinue services for anyone who needs it and who's benefiting from it, especially [if] I'm really seeing a huge difference. But if a student is unmotivated, and hurting the group, I document their behaviors and will talk to the case manager. Then we contact the parents to discuss the situation. If we don't see any improvement, what else can we do? In that kind of situation, I typically discontinue services. (Participant 2)

Participant 2 stated that they often work with students who demonstrate noncompliant behaviors and that they are willing to give the student a few months to see if the establishment of a healthy rapport can encourage the student to work on their language goals. The clinician suggested that they were quicker to dismiss students when their presence in group sessions of speech-language therapy hindered the progress of their classmates or led to noncompliance from other students in the group.

Other participants discussed motivation, but not in terms of noncompliance or unwanted behaviors. In some instances, clinicians noted that for middle school students who appear tired of attending speech-language therapy, the discontinuation of direct services might be an ideal option. Participant 9 described the challenges of deciding when to push through a student's fatigue in receiving speech-language services, and when it warrants their discontinuation:

> I really like to consider both formal and informal measures, but also the demeanor of the student. Do they come into the session shuffling their feet, not wanting to be in speech? If

> they don't want to be there, and we've worked through all their goals, and they've learned the strategies to the best of their abilities, then I think they sometimes are ready for dismissal. Also, I really like to consider the student's burnout level. Are they burnt out from coming to speech-language therapy for years to work on the same things? Like, yeah. So, I think sometimes you just know that a student is done with speech. You know when they are not motivated.

Participant 9 empathized with middle school students who have been receiving speech-language services since early in elementary school. They also acknowledged that sometimes students plateau in their progress and that they can understand why the redundancy of addressing certain areas of deficit could lead to the student becoming apathetic about their progress in speech-language therapy. In such cases, the clinician felt that the student would benefit more from being in class than from continuing to receive services.

Another participant shared a similar view, explaining that the age of the students, in conjunction with their motivation to address their language deficits, heavily influenced their decisions to discontinue direct services. The clinician identified plateaus in progress secondary to a lack of motivation to determine the discontinuation of speech-language services:

> I think as the kids get older, those early teenage years, and motivation goes down, I think you take that into consideration. If the student is not showing up to your sessions, and they are not making any progress towards achieving their goals, are they really gaining anything from getting speech? It's hard. You know there are still areas of weakness, but you also don't want students to miss class time if they are not making progress with you. (Participant 12)

Other participants took a more direct stance on motivation. For some clinicians, the idea of being unmotivated to work on speech-language deficits was hard to understand. The following excerpt reflects the approach one clinician uses when they anticipate that the student is not motivated to participate in speech-language therapy:

> If a student doesn't want to be there, then I will discharge them as soon as I can because they're not gonna make progress. I really try not to waste my time. I'd rather focus on kids that are motivated. (Participant 5)

The public middle school-based SLPs identified students' motivation to address their speech-language deficits as the primary factor they considered when deciding on when to dismiss a student from direct speech-language services. Most participants indicated that they are interested in providing speech-language services only when they can see that they are directly benefiting the student. In cases where the individual is noncompliant, or frequently misses sessions, participants felt that such students benefit more from remaining in the classroom for academic instruction, despite the nature of their speech-language needs.

Parent Input

All respondents emphasized that parents play a significant role in clinical decisions to dismiss students from direct speech-language services. Clinicians indicated that parent preferences and perspectives were critical factors that could alter a school-based SLP's decision to dismiss students from direct speech-language services. Data from participants were coded for this subcategory if they mentioned a parental desire to retain speech-language services or parental consent for their discontinuation.

Many of the participants in this study expressed that clinical decisions to dismiss a student from direct speech-language services are sometimes reversed by opposing input from

parents. One clinician explained the challenge of reconciling a data-driven decision to discontinue the direct speech-language services of a student, with parents who wish to retain services:

> I've definitely had instances where I decided to dismiss a student from speech therapy but had to change the decision because of the parents. I had the data to prove that they had achieved their goals, but, I don't know. It's hard. I mean, I'm a parent, and I understand that parents want what's best for their child. So, if I think a student should be dismissed from services, but parents are adamant that they still want some type of service, I might just reduce the frequency of services instead of outright dismissing them. Or, I might suggest consultation services, so that if anything changes in the future, they can be flipped back to direct services. (Participant 12)

Another participant shared a similar view that parents had a significant role in determining the finality of decisions to discontinue direct speech-language services for their child. A clinician talked about how, despite having an abundance of data supporting their decisions to dismiss students from services, they are sometimes unable to stand by it under scrutiny from parents:

> Dismissing students can be really hard. At the middle school level, I feel like either parents don't care, or they want services for life. And the reality is, even with data that shows the student's progress, for most of my kids, there are always going to be other areas of weakness. So, when parents are like, "But they're having trouble at home with this, or this, or that," I have a hard time completely dismissing them. So, with those students, if they were receiving services 6 times a month, I might reduce them to 3. Or I'll switch those students to consult and provide indirect services. (Participant 9)

One participant explained that in their district, parents hold a disproportionate amount of power in decision-making processes to dismiss students from speech-language services. The clinician explained that a traumatic past experience has caused them to intensely fear litigation. Consequently, their decisions to dismiss students from direct speech-language services are perpetually up for negotiation with parents:

> In my first year in this district, I had to go to court and defend almost every aspect of how I did my job. It was not a good experience. So, I'll be honest, the parents can be very litigious in my district. Sometimes they'll come into meetings and make demands for services that are out of nowhere. So, sometimes I find myself altering my recommendation to discontinue services just to avoid conflicts with the parents. (Participant 12)

When deciding to dismiss a student from speech-language services, input from the parent was a consistent factor, but seemingly only significant when there was opposition to the decision. In cases where there was strong parental push-back to the discontinuation of direct speech-language services, all but one participant said that they would modify their data-driven decision to avoid conflict with the parent.

Informal Measures

Participants in this study often emphasized the critical role that informal measures play in determining when a student should be dismissed from direct speech-language services. Many participants explained that informal measures help them rectify the dilemma of dismissing students, who would likely still struggle on a formal assessment, from direct speech-language services. Middle school-based SLPs also explained that informal measures allow them to see how the student is functioning in the classroom, and to gather evidence concerning the true

academic impact of their speech or language disorder. Statements from participants were coded as *informal measures* if they described evaluative procedures that did not result in the acquisition of a standardized metric.

One clinician revealed that when working with students with DLDs, formal and informal measures often conflict. This can create a challenge in determining a rationale for dismissal, even when a student's linguistic progress has plateaued. The following excerpt reveals how standardized assessments are not always used to determine whether a student should continue to receive direct speech-language services:

> For my eighth graders going into high school, I really only try to recommend direct services when they have severe needs. So, sometimes when deciding on discontinuing services, I really try to look at their goals from a year ago and I compare them to what they're doing now. Did they make enough progress to help them succeed in the classroom? The reality is, that a lot of my students are going to keep qualifying for services if we only base it on standardized scores. But informally, if I observe that they are effectively using their support in the classroom to succeed academically, I feel like they should be dismissed from services. By the time the student gets to eighth grade, I mean, how much more speech can we give them? That being said, determining who should get services in the high school is challenging for me. (Participant 1)

Another middle school-based SLP revealed that for eighth-grade students with DLD, standardized measures often failed to truly identify their strengths and weaknesses. When making decisions on dismissing a student from direct speech-language services, the clinician explained that they placed great value in the results from informal measures, a sentiment that is conveyed in this excerpt:

> If I'm considering dismissing a student from services, I weigh informal measures heavily. We need to look at them in conversation and consider the functional language more than standardized assessments. In my district, we use an informal assessment tool, that can be qualified. It's a little more in-depth but it gives you a great perspective on where the student is language-wise. Also, I also do naturalistic observations. So, I might observe them in their classroom, or during lunchtime. Are they able to effectively use language across academic and social contexts? If the answer is yes, I am likely to dismiss the student from direct services before they go to the high school. (Participant 8)

Another participant explained that they solely value the academic impact of a language disorder when making decisions to dismiss a student from direct speech-language services. The clinician stated that informal measures allow them to properly assess the academic impact:

> If I informally observe a student in the classroom, and they are able to do OK without me, and I don't really feel that coming to speech will not make that much of a difference, I try to dismiss them. I feel like students who are doing OK academically should spend more time in the classroom with a resource teacher. They work on a lot of the same skills that we do in speech. Also, for some students, speech therapy is really not appropriate, and they should be with their peers. (Participant 4)

The participants in this study explained most of their middle school students are in special education classrooms where they have in-class support to promote learning during instruction. Using informal measures, such as classroom observations, clinicians are often able to see that with the proper in-class support, many students receiving speech-language services are able to succeed academically; however, the clinicians expressed that, due to the nature of the severity of their deficits, most students would not be able to be dismissed from services based on

standardized measures. Overall, if informal measures indicate that the academic impacts of the student's speech-language deficits are being remediated by the supports in their classroom, then direct services should be discontinued.

Theory of Adaptation

During the selective coding phase of analysis, *Adaptation* emerged as a theoretical concept that effectively connected the major categories and subcategories of the present study. For the participants in this study, decision-making processes were adaptable based on influences in distinct areas. Thus, the theory of *Adaptation* is multi-faceted and includes four areas of influence: (a) *Eligibility Determination*, (b) *Selection of Assessments*, (c) *Influences of Caseload Size on Recommendations*, and (d) *Decisions to Discontinue Direct Services*.

Eligibility Determination

Analysis of the connections across the major categories of this study revealed that, for middle school-based SLPs, decisions concerning eligibility are largely based on their desire to help students. Most clinicians in this study stated that they would provide services to a student who demonstrates treatable weaknesses, even if they may not qualify for speech-language services based on standardized metrics. Participant 9 discussed how the desire to help students motivates their eligibility determination processes:

> When determining who is eligible for speech, I do definitely look at the kids who are below the 10th percentile in two or more subject areas. But, even without those standardized scores, if I think if there are areas of weakness in receptive or expressive language, and I think they would benefit from support, then I would make them eligible for services. I think the goal is, like, them being able to succeed in the classroom. If some direct speech therapy is something that would help give the student that success, then I

want to give them that direct instruction. I want to figure out the way that a student learns so that I can provide them with strategies to be successful in the classroom.

Another participant also emphasized that students who do not qualify as CI can also sometimes benefit from direct speech-language services. The clinician discussed the circumstances that could motivate them to determine whether a student with classifications such as MD, SLD, OHI, and autistic classifications is eligible for speech-language services:

> When we don't use CI eligibility, as far as guidelines, I look at areas of significant weakness and ask: Are they areas of weakness that I can specifically address? Sometimes there's kids with attentional issues. So sometimes language memory is more of an issue and I'm like, they're not CI, but has anyone addressed their problems with attention? And those types of things, where if it's something we feel, like, there's an area of weakness and I can help the student, especially with things like vocabulary building, their ability to identify context clues, or their ability to make inferences. If there's basic things that aren't in place, and I feel like giving a couple years of therapy will really help the student, then I go ahead and do that. (Participant 3)

The participants consistently indicated that the criteria that they use to determine eligibility for speech-language services is adaptable, driven by a desire to help students overcome communication difficulties. Although eligibility is determined by many factors, the clinician's belief in their ability to treat a student's speech or language disorder seemed to be the most influential.

Selection of Assessments

Analysis of the connections across the major categories of this study revealed that, when selecting assessments, the participants frequently consider the abilities of the student, their

comfort level in using an evaluation, and its availability. The clinicians also revealed that they try to select assessments that will best identify the student's strengths and weaknesses that are most relevant to success in the classroom.

The following excerpt reveals how the participant considers different subtests of comprehensive evaluations, and how they relate to academic achievement:

> I always select an assessment that is appropriate for the student, because again, I try to see what they can do, and exactly what supports they need. Do they need those little verbal cues, visual cues, or follow-up questions? Say they need, another way of things being presented to them, I want to know that. You know, what little things do they need to get where they need to be? Certain tests, like the CELF don't allow me to get that information. I also want to know, functionally, what do they need? What's going to help them in the classroom? (Participant 8)

Many participants indicated that for students with more significant communication challenges, they make sure to select evaluative measures that highlight their strengths. Participant 6 explained that as someone with children, they are cognizant as to how low standardized scores can be difficult for a parent to hear:

> In cases where I know the student is likely to qualify beforehand, I'll give the OWLS. I also like to include informal measures because I feel like they ease the parents' concerns, which to me is an important part of the evaluation process. I feel like, some kids, they score so badly on standardized measures. That has to be hard to hear for the parents. I want to make sure that I am giving them some good news. Because they sometimes don't get that from standardized scores.

Analysis of the major categories and subcategories of the data revealed that the participants in this study carefully select a combination of formal and informal measures when evaluating the speech and language skills of students. The assessments they select are based on a desire to accurately evaluate the language skills of the student, while allowing for the acquisition of results that can be presented to families in a sensitive manner.

Influences of Caseload Size on Recommendations

Of the 12 middle school-based SLPs who participated in this study, 6 reported caseloads of 80 students or more, with one participant reporting 100, and another 126 students. Most respondents acknowledged that large caseloads typically result in a high number of speech-language mandates to meet, which indirectly affects their decision-making processes.

A clinician referenced the mandates of their caseload as a challenging variable that influences the way they formulate recommendations:

> It's only December and my groups are all maxed out at 5. So, I'm not actively trying toadd kids to my caseload. A lot of times, I want to recommend services for more students, or more intense interventions, but in my district, it's just not possible. (Participant 11)

The participant explained how they have filled each of their groups to maximum capacity to ensure that speech-language mandates in the IEPs of their students are met. The clinician further explained that their caseload of 87 students restricts variability in their recommendations, as most students receive 30 minutes of group speech-language therapy, 3 times a month. The mandates of the caseload also influence what assessment they select for evaluative purposes; this clinician went on to explain that they use the OWLS-II, as they perceive it to be an easier evaluation.

Another clinician also addressed the challenges that a large caseload poses for a clinician as they do their job. In this statement, the participant spoke explicitly about the importance of EBP, and how their implementation of EBP can be adversely affected by excessively high caseloads:

> All of my IEPs state groups of up to five. I mean, would I like to have groups of two or three? Sure, but with my caseload, that's usually not possible. So, for students, I'll usually recommend groups of five, three times a month. As far as location, it's hard. I do like working in the classrooms, but if you don't get to lesson plan with the teacher, it's not always the best for the student. Also, a lot of my students are in different classrooms at different times. To make sure that I see all of my kids, I usually do speech in my office. (Participant 12)

The clinician discussed how meeting the speech-language mandates of the students on their caseload is their top priority; however, when caseloads become excessively large, meeting every mandate adversely affects other professional responsibilities, such as looking up evidence to support approaches to treatment and evaluative processes. Participant 4 also explained that excessively high caseloads can significantly increase workload aside from the provision of direct speech-language services, such as completing IEPs for each student and updating their progress indicators.

All participants agreed that meeting caseload mandates for direct speech-language services must be a top priority for all middle school-based SLPs. To accomplish this task, many of the participants indicated that they compromise their recommendations, and in some cases, their evaluative processes. Half of the participants explained that the mandates of their caseload require them to provide speech-language services to students in groups of five, the maximum

number allowed in New Jersey. Although many felt that smaller groups would be optimal for students, in some instances, failure to maximize group sizes would result in children being denied speech-language services that they are legally entitled to receive.

Decisions to Discontinue Direct Services

At the middle school level, the student's motivation to improve their language skills was a primary influence in clinical decisions to dismiss students from direct speech-language services. Participants also considered informal measures, such as how the student is performing in their classroom and input from the parents.

Participant 7 discussed how student motivation has a significant influence on their decisions to discontinue direct speech-language services:

> In those cases where the student is not motivated, I don't know. It's tough. For students who really do still need services, but don't want to be in speech, I might recommend consultation as opposed to direct services. I mean, I've had instances where the student is always late for their session, or they will tell their teacher that they are going to speech, but instead roam around in the hallways. In those cases, I don't know. Direct services really aren't helping, so I usually discontinue them.

Participant 7 explained that their recommendations are influenced by the behavior of the student. As such, if the student is not motivated to attend speech-language services, or does not participate when in attendance, then services are frequently discontinued.

Another participant shared a similar view on motivation. Participant 1 discussed how attempting to provide direct services to an unmotivated student is often an exercise in futility. In this excerpt, the clinician discussed how the motivation of a student influences their decisions to continue or discontinue direct services:

It also depends on the student, too. Are they willing to come to speech or not and put in the effort or no? I mean, if they don't, we don't want to waste our time. If we're kind of arguing with the student for the majority of the session, it doesn't help them.

All 12 participants in this study stated that student motivation to improve their speech-language skills influenced their decision-making processes, specifically when making recommendations for the discontinuation of direct services. Many indicated that students who are not interested in remediating their deficits are unlikely to make progress in speech-language therapy. Only one participant mentioned the strategy of increasing motivation to participate in speech-language services through the building of a rapport with the student. Two participants noted that working with students who have low motivation is a waste of time and that they try to dismiss such students from direct services as quickly as possible.

Summary of Findings

According to the ASHA, EBP is the successful integration of clinical expertise, client or caregiver perspectives, and both internal and external evidence. The major categories and theoretical concepts identified during the axial and selective coding phases of grounded theory analysis revealed that all participants used EBP when determining eligibility for speech-language services and in decision-making processes. Specifically, the participants in this study indicated heavy reliance on clinical expertise and the perspectives of students and their families. Participants also utilized internal evidence, such as data concerning specific students, when making clinical decisions; however, the participants did not mention scientifically based research, unless they were specifically asked about it. To such inquiries, clinicians largely indicated that they only seek scientific evidence when they are tasked with assessing or providing treatment for students with unfamiliar communication challenges.

Conclusion

This chapter provided a thorough analysis of the data obtained for this study using a grounded theory methodology. Commensurate with the tenets of grounded theory methodology, the data for this study were analyzed in three phases of coding: open coding, axial coding, and selective coding. The subcategories identified during the open coding phase of analysis were merged to create four major categories during the axial coding phase: (a) *Determining Eligibility for Speech-Language Services*, (b) *Selecting Measures to Evaluate the Speech-Language Skills of Students*, (c) *Making Recommendations for Speech-Language Services*, and (d) *Discontinuing Speech-Language Services*. During the selective coding phase of analysis, *Motivation* was identified as a theoretical concept that connected the major categories and subcategories of this study. The theoretical concept of *Adaptation* is multifaceted and composed of four distinct areas of influence: (a) *Eligibility Determination*, (b) *Selection of Assessments*, (c) *Influences of Caseload Size on Recommendations*, and (d) *Decisions to Discontinue Direct Services.*

For the categories and themes identified during the axial and selective coding phases, excerpts from participant interviews were used to illustrate how eligibility for speech-language services is determined at the middle school level, as well as how EBP influences the decision-making processes of public middle school-based SLPs. These decisions include selecting assessments for evaluative processes, formulating recommendations for services, and determining when to discontinue direct speech-language services. The results of the grounded theory data analysis revealed that the participants used EBP when determining student eligibility for speech-language services and in clinical decision-making processes. Data supporting this assertion were presented in excerpts demonstrating participant reliance on clinical judgment while considering the needs of students and their families. The participants in this study also

used internal evidence, such as informal data collected on students, when making clinical decisions; however, the participants indicated that they do not routinely partake in scientific research unless they are tasked with assessing or treating a student with an unfamiliar disorder.

The present study's findings offer perspectives from New Jersey public middle school-based SLPs as to how they determine eligibility for speech-language services and how EBP influences their decision-making processes. The data obtained from the participants for this study also highlighted variables that can affect a clinician's ability to implement EBP at the middle school level. These findings and recommendations to help remediate challenges to the use of EBP in decision-making processes will be discussed in Chapter 5.

CHAPTER 5

DISCUSSION

This chapter will begin with a summary of the study that will restate its need and significance while summarizing its findings. The findings of the study will then be discussed and interpreted to answer the research questions. I will also describe connections that were identified between these findings and past research and address the limitations of the study. Based on the outcomes of this study, recommendations for future practice and research will be discussed.

Summary of the Study

Need and Significance

The purpose of this qualitative grounded theory study was to better define how public middle school-based SLPs determine student eligibility for services, as well as the role that EBP plays in their decision-making processes. These processes included decisions on evaluative processes, recommendations for services, and the dismissal from direct speech-language services. Although there have been studies on how much time school-based clinicians spend researching EBP each week, few researchers have attempted to decipher the role that it plays in the decision-making processes of school-based SLPs. As EBP has been shown to increase the learning potential of students with DLDs in the LRE (Giangreco et al., 2010), it is important to examine the degree to which they are used in the decision-making processes of school-based SLPs.

Methods

Twelve New Jersey public middle school-based SLPs were interviewed for this study. These interviews were recorded via Google Meet, transcribed, and analyzed using a grounded theory methodology. This analysis was conducted to understand how school-based SLPs determine student eligibility for speech-language services, as well as the role EBP plays in the

processes of evaluation, making recommendations, and determining dismissal from services. The information obtained through the semi-structured interviews of this study provided data that were analyzed and coded at three distinct levels: open coding, axial coding, and selective coding. The goal of using the grounded theory methodology was to use the responses of middle school-based clinicians to construct theoretical answers to the research questions of the present study (Emanuel, 2021).

Major Findings

The results of the present study indicate that New Jersey middle school-based clinicians use EBP when determining student eligibility for services and in clinical decision-making processes. EBP, as defined by ASHA, is the integration of client/caregiver perspectives, clinical expertise, and evidence (ASHA, 2005). Analysis of the data obtained from the interviews with participants indicated that clinicians were highly motivated to address the communication needs of students, as well as alleviate the concerns of parents. Such motivations were influenced by clinical expertise or judgment, specifically the clinician's view on whether they could effectively treat a student. Clinicians also relied on internal evidence, or data collected informally from individuals, when making decisions; however, the participants largely neglected to mention external evidence obtained from scientific research, unless specifically asked about it. Citing time constraints due to professional responsibilities, most clinicians indicated that they partake in evidence-based research only when they are faced with assessing or treating a student with an unfamiliar diagnosis.

The responses from the participants often and organically developed into a format that reflected their answer, what they felt was right or wrong about it, and how they wished they could do things under different circumstances. The four major categories that were identified in the data

during the axial coding phase of analysis were (a) *Determining Eligibility for Speech-Language Services*, (b) *Selecting Measures to Evaluate Students*, (c) *Making Recommendations*, and (d) *Discontinuing Direct Services*. Analysis using a mind map during the selective coding phase identified *Adaptation* as a theory that connected these major categories. The theory of *Adaptation* is multidimensional and includes four distinct themes: (a) *Eligibility Determination*, (b) *Selection of Assessments*, (c) *Influences of Caseload Size on Recommendations*, and (d) *Decisions to Discontinue Direct Services.* The theory of *Adaptation* and its themes were used to interpret the answers to the research questions of this study.

Analysis of Findings

Research Question 1

New Jersey middle school-based SLPs consider standardized scores, academic impact, parent preferences, student characteristics, and administrative guidelines when determining student eligibility for speech-language services. These variables, to varying degrees, are influences on *Eligibility Determination*.

Influences on Eligibility Determination

Most participants expressed that eligibility determinations were largely influenced by their desire to help students and families overcome the challenges that can result from communication disorders. While many clinicians cited standardized measures as a critical factor in determining student eligibility for speech-language services, most of the participants indicated that they would likely make a student eligible for services if they demonstrated a treatable area of weakness that was affecting the student academically. For some participants, this meant making students eligible for speech-language services, even when comprehensive standardized scores

indicated that their ability to comprehend and utilize language was in the average range of functioning.

The findings of the present study conflict with those of Fulcher-Rood et al. (2018) and Girolamo et al. (2022). The study by Fulcher-Rood et al. (2018) identified formal and informal measures as common practices for determining student eligibility for speech-language services in public schools. In their study, through phone interviews with 39 school-based SLPs, the researchers found, in contrast to the present study, that more than half of the respondents decided eligibility for speech-language services solely on standardized scores (Fulcher-Rood et al., 2018). These findings were supported by Girolamo et al., who found that most clinicians utilize standardized measures to determine eligibility for services and properly gauge a student's current abilities as they relate to specific areas of speech-language proficiency (Girolamo et al., 2022).

The preferences of the parent(s) were described by all participants as a major factor in determining whether to provide their child with services. At the most basic level, the middle school-based SLPs interviewed universally stated that, regardless of the clinician's eligibility determination, parents always have the right to decline services for their child. Many of the participants had children themselves and empathized with the notion that parents generally want what is best for their child. Participants also explained that parents who were motivated to get services for their children generally had students who were inspired to improve their speech-language skills. Clinicians frequently explained that the motivation of the student to improve often determined the effectiveness of speech-language services.

A study by Sylvan (2014) also found that parents play a critical role in determining student eligibility for services. The study found that ambiguity concerning policies on eligibility gave parents an inordinate amount of power in determining whether their child should receive

speech-language services. Contrary to the present study where most participants equated a parent eager for speech-language services with a student who is motivated to receive them, many of the 39 participants in Sylvan's study felt such eagerness adversely affected their ability to determine who should be eligible. In the study by Sylvan, participants' fear of scrutiny and litigation increased the likelihood that they would find students eligible for speech-language services. The participants also indicated that they felt this pressure, even when their interactions with the parents were contentious (Sylvan, 2014).

Most of the participants identified student interest and motivation as variables to consider when determining eligibility for speech-language services at the middle school level. Two clinicians stated that they typically ask middle school students their preference for attending speech-language therapy following a formal evaluation. Both participants stated that they were unlikely to make a student eligible for services if the student strongly indicated that they had no interest in attending speech-language therapy. In other instances, clinicians noted that they would consider making a student eligible for services, despite their standardized scores, if they appeared motivated to work on their speech or language deficits.

The participants in this study collectively expressed that administrators, such as principals, supervisors of special services, and directors of special services, did not heavily influence their eligibility determinations; however, according to the participants, special services supervisors do frequently reference the parameters of N.J.A.C. Section 6A:14-3.5 when answering questions from clinicians concerning who should be eligible for speech-language services. Clinicians indicated that the guidelines within the code are somewhat nebulous and susceptible to different interpretations. All but two clinicians stated that their administrators and supervisors want to see standardized measures when making an eligibility determination, but they

do not specify scores that would make a student eligible to receive speech-language services. Participants universally stated that they believe administrators have little knowledge concerning the role of an SLP in the school setting, which may contribute to their reluctance to provide suggestions regarding determining eligibility for speech-language services.

The findings of the present study in terms of the influence of administrators on eligibility determinations for speech-language services are commensurate with past research. The study by Sylvan (2014) found that administrators frequently referred clinicians to federal guidelines when asked questions about eligibility for services. The study also found that administrators, when asked to explain why eligibility criteria for speech-language services varied among many clinicians, could not provide an answer (Sylvan, 2014). Similarly, Fulcher-Rood et al. (2018) found that the provision of speech-language services was based primarily on the expertise of the clinician and that administrators did not provide any guidelines for eligibility (Fulcher-Rood et al., 2018).

Research Question 2

The factors identified in data of the present study as influential to approaches to assessment were the perceived ability of the student, the comfort level of the clinician in using an assessment, and the availability of evaluations. For evaluative processes, these variables are influences on the *Selection of Assessments*. Further, group sizes, frequency and location of services were largely determined by the *Influences of Caseload Size on Recommendations*.

Selection of Assessments

The participants in this study routinely use EBP when selecting assessments for evaluative processes. Specifically, the participants relied heavily on their clinical expertise, and internal research, or data acquired on the student. These data often included observations and

parent perspectives; however, when selecting assessments for an evaluative process, the participants indicated that they did not typically conduct scientific research.

Therefore, the consensus among the participants was that the true value of standardized assessments is their usefulness in identifying speech or linguistic weaknesses and potential barriers to academic achievement. Although there was limited variability as to which assessments clinicians regularly utilized, the participants indicated that they always try to consider the perceived abilities of the students when choosing a standardized evaluation.

The participants in the present study stated that they routinely use clinical expertise to select assessments that they feel will best reflect the language ability of the student. Therefore, the data for this study revealed that middle school-based SLPs will use evaluations that they perceive as less language-intense when assessing the linguistic abilities of a student with severe cognitive challenges. Further, although the findings of this study seemed to indicate that clinical expertise trumps formal measures when determining student eligibility for speech-language services**,** participants indicated that, when possible, they prefer to have standardized scores that support their decision-making processes. Thus, in situations where, based on informal measures, the clinician felt that the student needed speech-language services, they were likely to administer a more complex formal evaluation to ensure that their evaluative results warranted intervention.

The consideration that this study's participants showed regarding the psychometric properties of standardized evaluations conflicts with earlier research. A study by Fulcher-Rood et al. (2018) that interviewed 39 school-based SLPs found that most clinicians did not consider psychometrics when selecting a formal measure for evaluative processes (Fulcher-Rood et al., 2018). The findings of this study also conflict with those of Betz et al. (2013), who, having surveyed 364 school-based SLPs, found that most clinicians selected standardized assessments

based on the recency of their publication as opposed to their diagnostic accuracy, validity, or reliability (Betz et al., 2013).

The participants in this study reported that they consider the input of the parent when making decisions as to which standardized assessment(s) would be used for a speech-language evaluation. Although studies have shown that school-based SLPs often include parent interviews in their informal evaluative processes (Fulcher-Rood et al., 2019; Caesar & Kohler, 2009), many of the participants in this study stated that they often do not get to interview parents before conducting a formal assessment. The participants did note, however, that parent interviews were always conducted by a member of the CST before the commencement of formal testing, and that their reported concerns often influenced which evaluations they would include in the speech-language evaluative process. For instance, many participants explained that, at the middle school level, a speech-language evaluation would not typically include a formal articulation assessment, unless speech intelligibility was reported as a concern by the parent. Moreover, the participants in this study often tried to base at least one measure of their assessment battery on the input from the parents. This practice supports the recommendations of a study by Fulcher-Rood et al. (2019), who suggested that parents often have valuable perspectives on what approach to assessment would be most appropriate for evaluating their children.

Influences of Caseload Size on Recommendations

The management of large caseloads is a challenge school-based clinicians consistently face. It often requires clinicians to compromise their recommendations for services to meet student mandates (Brandel, 2020). Caseload size has a direct impact on decisions concerning group sizes and contributes to uniformity in service frequency recommendations.

The preferences of the participants concerning clinical recommendations following evaluative processes indicated that most were motivated to implement EBP for the benefit of the students and their families. For instance, all but one participant stated that they prefer smaller groups. Further, for students with more severe challenges, nearly all participants stated that they try to recommend individual speech-language therapy at least once per week. Despite the desire to treat students in smaller groups or individual settings, due to high caseloads and the related service mandates they encompass, such recommendations can frequently only be made for students with severe needs. As a result, many of the participants reported making similar recommendations for the length and frequency of speech-language services.

The uniformity of speech-language services recommendation is a finding that is supported by past research. For instance, in a study conducted by Brandel (2020), 439 school-based SLPs were surveyed to identify factors that influence their recommendations concerning the length and frequency of direct speech-language services. The findings suggest that in terms of direct frequency and length, many school-based SLPs make similar recommendations. The most common recommendation by the respondents was direct speech-language services, one to two times per week, for 30-minute sessions. Similar to the present study, the findings of Brandel indicate that caseload size was a significant factor in determining the frequency of services (Brandel, 2020). These findings were supported in an earlier study by Brandel and Frome Loeb (2011) that, based on a survey of 2,000 school-based SLPs, most SLPs recommended services one to two times per week for 21–30 minute sessions, despite the characteristics of the student. The study also found that large caseloads increased the tendency of the clinician to provide services in a group setting, and significantly reduced the amount of time that students received for direct speech-language services (Brandel & Frome Loeb, 2011). A previous study by Mullen

and Schooling (2010) that analyzed 16,000 students also found uniformity in frequency recommendations for direct speech-language services. The study also noted that recommendations seemed to vary based on school district, rather than student characteristics (Mullen & Schooling, 2010).

Research Question 3

The decision to dismiss a student from direct speech-language services is based on a number of factors that were identified in the data. These factors include the motivation level of the student, parent input, and informal measures. These variables, to varying degrees, are influences on *Decisions to Discontinue Direct Services*.

Influences on Decisions to Discontinue Direct Services

The participants in this study consistently use EBP when making decisions to dismiss students from direct speech-language services. Specifically, the participants relied heavily on their clinical expertise, and internal research, or data acquired on the student. This data often included data from sessions of speech-language therapy and student perspectives; however, when making decisions to discontinue direct services for a student, the participants indicated that they did not often conduct scientific research.

The participants indicated that the student's level of motivation to improve their speech-language skills was critical in determining whether to discontinue direct speech-language services. Many of the participants alluded to the notion that a student's desire to attend speech-language therapy frequently decreases as they progress through middle school. All but two participants stated that a student could be dismissed from speech-language services based on the results of a formal assessment; however, like eligibility, in many cases, standardized scores were variables to consider, but not the primary factors, in determining to discontinue the direct speech-

language services of the student. Due to the lifelong challenges that often accompany DLDs, the participants stated that informal measures, rather than formal measures, are more useful in assessing the academic impact of students' linguistic deficits. For students who express that they no longer wish to attend speech-language therapy, the participants often observe the student in the classroom to determine how severely their language skills are affecting their ability to participate in academic instruction. Most clinicians indicated that if the student can succeed academically with classroom supports, they would likely discontinue direct services.

The notion of dismissing a student from speech-language services when they are no longer motivated to receive them is supported by ASHA (2004). A study by Steppling et al. (2007) found that as students get older, the development of the student slows, causing the benefits of speech-language services to become less overt. As a result, due to what they perceive as stagnation in development, older students may lose their motivation to attend speech-language therapy. Contrary to ASHA, Steppling et al. suggested that a lack of motivation on the part of the student should not be the primary reason for dismissing a student. Instead, the researchers argued that clinicians should improve their understanding of student strengths and weaknesses, teach specific strategies that will help them succeed in the classroom, and include parents and teachers in the intervention process (Steppling et al., 2007).

Similar to the findings of the present study, research by Sylvan (2014) that included interviews with 25 school-based SLPs found that deciding when to discontinue a student's speech-language services is often a challenge. Participants in Sylvan's study often suggested that dismissal from services was based more on clinical expertise, and less on standardized measures, or the achievement of speech-language goals. Sylvan also found that students who were seemingly unmotivated by academics made it difficult for clinicians to determine how

significantly their language skills were affecting their performance in the classroom (Sylvan, 2014). Thus, while the participants in this study found that academic impact was a critical factor in determining when direct speech-language services should be discontinued, Sylvan (2014) suggested that in some cases, it may be an unreliable measure.

All respondents emphasized that parents play a significant role in clinical decisions to dismiss students from direct speech-language services. Clinicians indicated that parent preferences and perspectives were critical factors that could alter their decision to dismiss a student from direct speech-language services. While parents ultimately have the right to discontinue speech-language services at any time, many of the participants expressed that clinical decisions to dismiss a student from direct speech-language services are sometimes reversed by opposing input from parents. Although most participants explained that they were motivated to help families that wanted their services, they struggled with determining when the speech-language skills of a student had been maximized in therapy. Many of the clinicians expressed that the parents of the students on their caseload are either apathetic towards the discontinuation of services or want them continued through high school.

Commensurate with the findings of the present study, Steppling et al. (2007) found that many caregivers are averse to the idea of discontinuing direct speech-language services, regardless of the age of the student or the effectiveness of therapy. Sylvan (2014), in a study that interviewed 25 school-based SLPs, found that parents had the ultimate say in deciding whether a student should be dismissed from services. In alignment with the present study, Sylvan (2014) found that clinicians feared conflict with parents and acquiesced to their preferences to avoid confrontation (Sylvan, 2014). Concerning the dismissal of students from speech-language services, a study by Selin et al. (2022) that surveyed 140 healthcare-based SLPs and 423 school-

based SLPs, proposed the utilization of interventions that are created and implemented through collaboration with parents. Such interventions include weekly contact with parents that allows the clinician to coach caregivers on ways to promote strategies practiced during the provision of direct services. Through the collaborative pursuit of mutually agreed-upon goals, speech-language services can be amicably discontinued upon their achievement (Selin et al., 2022).

Limitations of the Study

This study had several limitations that should be noted. First, this study focused on public middle school-based clinicians only. It is unclear how the research questions would be answered by clinicians in non-public or non-middle school settings. Second, although not by design, all but four of the participants taught at schools in suburbs, with student populations primarily coming from middle-class socioeconomic backgrounds. It is not clear how representative the participants may be of clinicians serving other types of communities. Additionally, in future studies, researchers might ask participants if they had experience working in healthcare settings. Further, future studies should include inquiries about the education of the participants and their clinical experience before becoming an ASHA-certified SLP. Such experience could potentially influence how a clinician views the role of a school-based SLP, and the role that EBP plays in their decision-making processes (Greenwell & Walsh, 2021).

Recommendations for Future Practice

The results of the present study indicate that New Jersey middle school-based clinicians use EBP when determining student eligibility for services and in clinical decision-making processes. EBP, as defined by ASHA, is the integration of clinical expertise, client/caregiver perspectives, and evidence (ASHA, 2005); however, concerning the final component, clinicians rely heavily on internal, rather than external, evidence. Thus, the decision-making processes are

largely based on clinical opinion, and as such, susceptible to subjectivity. As speech-language services are provided in public schools, the establishment of scientifically researched universal criteria for determining eligibility for services would limit subjectivity on the part of the clinician. Further, the implementation of appropriate criteria that public middle school-based SLPs could use for eligibility determination would increase the likelihood that only students who needed speech-language services for academic success received them.

The participants in this study indicated that supervisors and administrators leave most decisions on eligibility for speech-language services and recommendations to the clinicians; however, educational leaders can play an important role in helping school-based SLPs appropriately determine eligibility for services and make evidence-based clinical decisions. For instance, educational leaders can work to ensure that SLPs have a wide selection of formal assessments that allow them to evaluate students with standardized measures that are psychometrically appropriate. As a result, clinicians could adhere to a more consistent quantitative metric for determining eligibility for services. This would not eliminate the inclusion of informal assessments in evaluative processes, as multiple measures are needed to determine the validity of standardized results (Daub et al., 2021; Fulcher-Rood et al., 2018); however, in considering the three prongs of eligibility for speech-language services (e.g., Is there a disability? Is this disability affecting the educational performance of the student? Are support services needed for the student to succeed in a general education setting?; Selin et al., 2022), psychometrically appropriate formal measures could significantly reduce the risk of subjectivity for identifying a disability. The results of such assessments can be used to design speech-language goals specifically targeting the areas of linguistic ability that are most critical for success at the middle school level.

The failure to consider the psychometric appropriateness of formal assessment comes with a considerable degree of risk. A study by Nair et al. (2023) warns that formal evaluations that are psychometrically inappropriate can contribute to the marginalization of individuals with speech and language disabilities. The researchers argued that such measures are often culturally biased, designed with norms commensurate with the linguistic patterns of students of White ethnicity, and within the middle class (Nair et al., 2023). An earlier study by Denman et al. (2017) supported this notion and implored clinicians to consider whether the psychometrics of a given assessment are appropriate for the individual they are trying to evaluate. A further study by Daub et al. (2019) also emphasized the need for improved psychometrics in standardized assessments, indicating that formal evaluations should be designed using item response theory (IRT) rather than classical test theory (CTT). IRT attempts to identify the language ability of an individual by considering how test items may fluctuate in difficulty, while CTT views all evaluative tasks equally. According to Daub et al. (2019), the use of IRT analysis on evaluative results obtained from psychometrically strong formal measures can result in an enriched clinical interpretation of an individual's language ability. The derivation of such data can lead to more informed decisions concerning treatment recommendations, service delivery, and eventual dismissal from speech-language services (Daub et al., 2019).

The outcomes of the present study suggest that school-based SLPs favor the provision of direct services, rather than indirect services, which are most often provided outside of the classroom. According to research, these professional tendencies may be less advantageous to school-based clinicians than alternate approaches to service delivery. For instance, Brandel (2020) noted the utilization of a 3:1 model, whereby school-based SLPs provide direct services to their students outside of the classroom 3 times per week, while providing indirect services the

fourth week. Such indirect services could include teacher consultations and the provision of linguistic strategies for students that directly correlate to curriculum-based goals (Brandel, 2020). Further, variations in service delivery recommendations, such as the facilitation of speech-language therapy within the classroom, could provide clinicians with more scheduling flexibility, while limiting the amount of time that students spend away from classroom instruction (Schraeder, 2019). Clinicians can also consider providing more individual sessions of speech-language therapy at reduced length but with increased intensity (Byers, 2021; Justice, 2018).

Recommendations for Future Research

This study focused on public middle school-based SLPs in New Jersey. In New Jersey, students with language impairments adversely affecting their academic performance are often classified as CI. When appropriate, CI classification requires quantifiable measures obtained from two standardized assessments (New Jersey Administrative Code 6A:14, 2015).; however, many states allow for the results from informal measures such as language samples, parent/teacher interviews, and classroom observations to determine the presence of language impairment (Fulcher-Rood et al., 2018). Therefore, future research on how middle school SLPs determine eligibility for speech-language services, as well as how EBP influences their decision-making processes, should include clinicians in other states.

Future studies on the utilization of EBP in the decision-making processes of SLPs should include clinicians from non-school settings. According to a study by Fulcher-Rood and Castilla-Earls (2023), there are differences in how clinicians in schools and healthcare settings approach eligibility, assessment, and treatment. Such differences include the utilization of more standardized assessments and more stringent criteria for eligibility in the school setting. Healthcare settings also frequently provide direct services individually, as opposed to in a group

setting. Clinicians who work in healthcare settings also feel that they have more supervisory support than school-based SLPs (Fulcher-Rood & Castilla-Earls, 2023). As such, future research should target the differences in how clinicians in different settings integrate EBP into their decision-making processes.

As the present study involved participants only from public schools with CCCs, future research should include clinicians from private schools and those without ASHA certification. Additionally, topics such as the psychometric properties of formal evaluations and modalities for the delivery of speech-language services must be investigated more thoroughly. Concerning formal evaluations, while research has recognized the danger of assessments with psychometrics that lack validity or that can be easily misinterpreted by the administrator, such measures continue to be used regularly by school-based SLPs. Although research has offered strategies to circumvent such evaluative limitations, an effective resolution requires further research. Further, modalities for service delivery that contrast with the traditional provision of direct speech-language therapy outside of the classroom, such as indirect services, the 3:1 model, and in-class services, have been deemed effective in combating workload challenges such as high caseloads; however, more evidence is needed concerning their effect on student outcomes.

Finally, the participants in the present study largely indicated that their administrators provide little input in terms of decision-making processes, eligibility for services, or the utilization of EBP. The participants speculated that this may be because their supervisors do not have backgrounds in speech-language pathology. Therefore, future research may benefit from including participants who are special services supervisors or administrators. Including such professionals could contribute to a better understanding as to how supervisors and administrators support school-based SLPs in the school community.

Conclusion

The present study was conducted to provide information on how New Jersey middle school-based SLPs determine eligibility for speech-language services, as well as how EBP influences their decision-making processes. These decision-making processes included selecting formal assessments, making recommendations, and dismissing students from direct speech-language services. To achieve its goal, this study recruited and interviewed 12 ASHA-certified New Jersey middle school-based clinicians as participants. The participants took part in interviews via Google Meet that were recorded and transcribed. The transcriptions were analyzed using a grounded theory methodology.

The results of the study suggest that, at the middle school level, EBP plays a role in decisions concerning eligibility, evaluation, recommendations, and dismissal from services; however, there is variability concerning how EBP adapted is utilized in the public middle school setting. Several factors, such as the desire of the clinician to help students and families, the motivation of the student to improve their speech or language skills, and the challenges that accompany large caseloads, influence how clinicians adapt their implementation of EBP. Consequently, the participants in this study all indicated that they use EBP in clinical decision-making, but that clinical expertise and the perspectives of the students and parents are weighed much more heavily than the best available evidence.

The findings of this study indicate that middle school-based SLPs are genuinely motivated to help students in need; however, that desire to help can be hindered by factors such as inappropriate evaluative processes and unmanageable caseloads. Suggestions for future practices include increased efforts on the part of educational leaders to ensure that school-based SLPs have access to formal evaluations that are psychometrically appropriate for the student

populations they evaluate. To combat the challenges of large caseloads, clinicians should consider varying their modalities of service delivery. Researched variations include individual sessions at shorter lengths, the utilization of a using a 3:1 service delivery model, and the provision of speech-language services within the classroom.

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Appendix A

Participant Recruitment Letter

Dear (name of speech-language pathologist),

My name is James Farley, and I am a current doctoral student at the College of Human Development, Culture, and Media, at Seton Hall University. I am in the process of completing a dissertation with the school's Department of Education Leadership, Management and Policy. The dissertation is being completed in partial fulfillment of the requirements for a Doctor of Education degree.

I am writing to invite you to participate in my research study about how evidence-based practices influence the decision-making processes of public school-based speech-language pathologists. Such processes will include those related to evaluation, eligibility determination, recommendations, and dismissal from speech-language services. You are eligible to participate in this study because you are an NJ public middle school-based speech-language pathologist certified by the American Speech-Language-Hearing Association.

If you decide to participate in this study, you will participate in a 12-question one-on-one interview of approximately 30 minutes, via Google Meet. This video and audio will be recorded and transcribed. You will be provided with a transcript of your interview within 24 hours of your interview. At that time, you will have the option to approve the transcript or request an additional meeting via Google Meet, to modify any of your answers.

All individuals who participate in this study will do so anonymously. The researcher will keep anonymity by requesting that participants use pseudonyms when communicating through email, and when participating in the interview portion of this study. Further, the interviews will not contain any information that could be used to identify the identity of the participants.

The data collected during this study will be used to gather information on how NJ public school-based SLPs use evidence-based practices to influence their decision-making processes. Please also note that the electronic data obtained from this study (e.g., the audio and video recording, and the electronic transcripts) will be de-identified and securely stored on a USB flash drive, and on OneDrive cloud storage. Both the USB flash drive and the OneDrive cloud storage will be password-protected. When not in use, the USB flash drive, and the hard copies of the transcripts will be kept in a SentrySafe Fireproof Safe Box. This safe box is secured with a lock requiring a key, that will remain in possession of the researcher. The study will be used to gather information on how NJ public school-based SLPs use evidence-based practices to influence their decision-making processes.

Please remember that participation in this study is completely voluntary. If you would like to be a participant in this study, or have any further questions, email me at [redacted], or call me at [redacted].

Sincerely,

James Farley

Appendix B

Interview Protocol

1. How are students referred to you?

2. How is eligibility for services determined?

   Potential follow-up: Can a student still be found eligible for speech-language services if they are not speech or language impaired?

3. What guidelines do administrators provide clinicians regarding eligibility determination for speech-language services?

4. How are the speech-language abilities of a student assessed?

5. How do student characteristics influence the selection of the assessments that will be used during a speech-language evaluation?

6. For students who are eligible for speech-language services, how do you determine the location, frequency, and group size of their services?

7. How do you determine when a student should be dismissed from speech-language services?

8. How does clinical expertise influence your decisions concerning a student's eligibility for services, evaluation processes, recommendations for services, and dismissal from services?

9. How does input from stakeholders (e.g., parents, teachers, faculty members, the student) influence your decisions concerning a student's eligibility for services, evaluation processes, recommendations for services, and dismissal from services?

10. How does the latest research influence your decisions concerning a student's eligibility for services, evaluation processes, recommendations for services, and dismissal from services?

11. How do administrators in your district support the use and feasibility of evidence-based practices for school-based SLPs?

12. Can you explain any other variables that may influence your decisions concerning a student's eligibility for services, evaluation processes, recommendations for services, and dismissal from services?

Appendix C

Informed Consent Form

Title of Research Study: The role of evidence-based practice in the decision-making processes of public school-based speech-language pathologists

Principal Investigator: James Farley, Ed.S.

Department Affiliation: Department of Education Leadership, Management, and Policy

Sponsor: This research is supported by the Department of Education Leadership, Management, and Policy.

Brief summary about this research study:

The following summary of this research study is to help you decide whether or not you want to participate in the study. You have the right to ask questions at any time.

The purpose of this study is to determine how evidence-based practices influence the decision-making processes of public school-based speech-language pathologists.

You will be asked to participate in a 12-question interview that will be conducted virtually via Google Meet. You will be asked to review a transcript from your interview within 24 hours of your interview. You will then have the option to approve the inclusion of the interview in the study or have the option to request a follow-up virtual meeting, via Google Meet, where you can modify any previous answers.

We expect that you will be in this research study for approximately 30 minutes for the interview. Optional follow-up interviews should take no longer than 10 minutes.

The primary risk of participation is for individuals who are shy or feel nervous talking to unfamiliar individuals, participation in the one-on-one interview may cause stress.

The main benefit of participation is contributing to information regarding how public school-based speech-language pathologists utilize evidence-based practice in decision-making processes.

Purpose of the research study:

You are being asked to take part in this research study because you are a speech-language pathologist certified by the American Speech-Language-Hearing Association and you work in a New Jersey public middle school.

Your participation in this research study is expected to be for a 30-minute interview. Within 24 hours of the interview, you will be provided with a transcript of the interview. After you have reviewed the interview transcript, you can approve its use in the study, or you may wish to modify one or more of your responses. If you approve the interview transcript, your participation in the study will be concluded. If you wish to modify any answers, you can request a follow-up

meeting, where previous interview answers can be changed. Once you approve the modified responses, your participation in the study will be concluded.

You will be one of _12–15__ people who are expected to participate in this research study.

What you will be asked to do:

Your participation in this research study will include:

- Participation in a 12-question interview that will be conducted virtually via Google Meet
- Reviewing the transcript from your interview
- Approving the interview transcript, or requesting to make modifications to answers
- If necessary, participate in a follow-up interview to modify any previous answers that need to be changed

It is expected that you will be in this research study for approximately 30 minutes for the interview. Optional follow-up interviews should take no longer than 10 minutes.

The study is expected to begin by 12/05/2023 and end by 02/15/2024. Following recruitment, participants will be asked to take part in a one-on-one 12-question interview that will conducted virtually via Google Meet. The interviews should take no longer than 30 minutes. The interviews will take place between 12/15/2023, and 01/15/2024. The following are examples of questions that may be asked during the interview:

How is eligibility for speech-language services determined? What guidelines do administrators provide clinicians regarding eligibility determination for speech-language services? How are the speech-language abilities of a student assessed? How do student characteristics influence the selection of what assessments will be used during a speech-language evaluation? How do you determine when a student should be dismissed from speech-language services?

The audio and video for each interview will be recorded via Google Meet. Interviews will also be transcribed using Google Meet. The transcriptions will be formatted and saved on a Microsoft word document. All data (e.g., the audio, video, and transcriptions for each meeting) will be de-identified and securely stored on a USB flash drive, and on OneDrive cloud storage. Both the USB flash drive and the OneDrive cloud storage will be password-protected

Hard copies of the transcriptions will be reviewed by the researcher after every interview. The hard copies of the transcripts, and the color-coded units of data, grouped together during the analysis phase, will be kept in a SentrySafe Fireproof Safe Box. This safe box is secured with a lock requiring a key, that will remain in the possession of the researcher.

In using the grounded theory approach to analysis, the researcher will review and code the data in a four-step process: Initial coding, open-coding, axial-coding, and selective-coding. This process begins immediately after an interview is complete, and analysis of the data continues until saturation is achieved. The concepts that the researcher draws from the data will be used to formulate conceptual themes, that will be used to answer the research questions of the study. All analysis for the present study will be conducted solely by the researcher, at the researcher's home office.

Your rights to participate, say no, or withdraw:

Participation in research is voluntary. You can decide to participate or not to participate. You can choose to participate in the research study now and then decide to leave the research at any time. Your choice will not be held against you.

The person in charge of the research study can remove you from the research study without your approval. Possible reasons for removal include **missing study visits, non-compliance with the study procedures, or if it is discovered that participants do not fit the eligibility criteria for this study (e.g., the clinician is not ASHA certified or does not work in a public middle school).**

Potential benefits:

There may be no direct benefit to you from this study. You may obtain personal satisfaction from knowing that you are participating in a project that contributes to new information.

Potential risks:

The risks associated with this study are minimal in nature. Your participation in this research may include increased stress, specifically if you are shy or feel uncomfortable speaking with unfamiliar people. Additionally, although data will be kept confidential, participants are cautioned not to provide any identifying information during the interview. This includes using your name, the specific name of your school, or the names of any other individuals related to your workplace. Although all data will be secured using measures previously discussed, using any identifying information puts your privacy at an increased risk.

Confidentiality and privacy:

Efforts will be made to limit the use or disclosure of your personal information. This information may include the research study documents or other source documents used for the purpose of conducting the study. These documents may include the initial list of names of 500 New Jersey public middle school-based speech-language pathologists, and the addresses of their places of work, as well as the email addresses of the participants of the study. We cannot promise complete secrecy. Organizations that oversee research safety may inspect and copy your information. This includes the Seton Hall University Institutional Review Board who oversees the safe and ethical conduct of research at this institution.

The interviews will be hosted by Google Meet and will involve a secure connection. Terms of service, addressing confidentiality, may be viewed at [redacted]. Upon receiving the transcript of your interview, any possible identifiers will be deleted by the investigator. You will be identified only by a unique subject number. Your email address, which may be used to contact you to schedule a study visit will be stored separately from your survey data. All information will be kept on a password-protected computer only accessible by the research team. The results of the research study may be published, but your name will not be used.

This study is part of a project that is also being performed through Seton Hall University. It is possible that representatives from this institution may also request the right to inspect the research data.

Data sharing:
Data collected from this study will not be shared with anyone outside of the study team.

Cost and compensation:

You will not be responsible for any of the costs or expenses associated with your participation in this study.

There is no payment for your time to participate in this study.

Conflict of interest disclosure:

The principal investigator and members of the study team have no financial conflicts of interest to report.

Contact information:

If you have questions, concerns, or complaints about this research project, you can contact the principal investigator James Farley at [redacted], Dr. Jennifer Timmer, at [redacted], [redacted] or the Seton Hall University Institutional Review Board ("IRB") at [redacted] or [redacted].

Audio and/or video recordings will be performed as part of the research study. Please indicate your permission to participate in these activities by placing your initials next to each activity.

I agree	I disagree	
_____	_____	The researcher may record my [audio or video] interview. I understand this is done to help with data collection and analysis. The researcher will not share these recordings with anyone outside of the study team.

I hereby consent to participate in this research study.

Signature of participant	Date
Printed name of participant	
Signature of person obtaining consent	Date
Printed name of person obtaining consent	

Appendix D

Institutional Review Board Approval

SETON HALL UNIVERSITY
1 8 5 6

December 14, 2023

James Farley
Seton Hall University

Re: IRB # 2024-525

Dear James,

At its December meeting, the Research Ethics Committee of the Seton Hall University Institutional Review Board reviewed and approved your research proposal entitled, "The Role of Evidence-Based Practices in Decision-Making Processes of Public School-Based Speech-Language Pathologists" as submitted. This memo serves as official notice of the aforementioned study's approval. Enclosed for your records are the stamped original Consent Form and recruitment flyer. You can make copies of these forms for your use.

The Institutional Review Board approval of your research is valid for a one-year period from the date of this letter. During this time, any changes to the research protocol, informed consent form or study team must be reviewed and approved by the IRB prior to their implementation.

You will receive a communication from the Institutional Review Board at least 1 month prior to your expiration date requesting that you submit an Annual Progress Report to keep the study active, or a Final Review of Human Subjects Research form to close the study. In all future correspondence with the Institutional Review Board, please reference the ID# listed above.

Thank you for your cooperation.

Sincerely,

[redacted]
Mara C. Podvey, PhD, OTR
Associate Professor
Co-Chair, Institutional Review Board

[redacted]
Phyllis Hansell, EdD, RN, DNAP, FAAN
Professor
Co-Chair, Institutional Review Board

Office of the Institutional Review Board
Presidents Hall · 400 South Orange Avenue · South Orange, New Jersey 07079 · Tel: [redacted] · Fax [redacted]
www.shu.edu
WHAT GREAT MINDS CAN DO